Government of Saskatchewan

Annual Report 1990-91

Saskatchewan Environment and Public Safety

92-03556/

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Letters of Transmittal

Her Honour
The Honourable Sylvia O. Fedoruk, O.C., S.O.M.
Lieutenant Governor of Saskatchewan
Government House
4607 Dewdney Avenue
Regina, Saskatchewan
S4P SV7

Your Honour:

It is my pleasure to submit to you the Annual Report for the Department of Environment and Public Safety for the fiscal year ending March 31, 1991.

Respectfully submitted,

Carol Carson

Carol Carson
Minister

The Honourable Carol Carson
Minister of Environment and Public Safety

Dear Madam:

It is my pleasure to present to you the 1990-91 Annual Report for the Department of Environment and Public Safety.

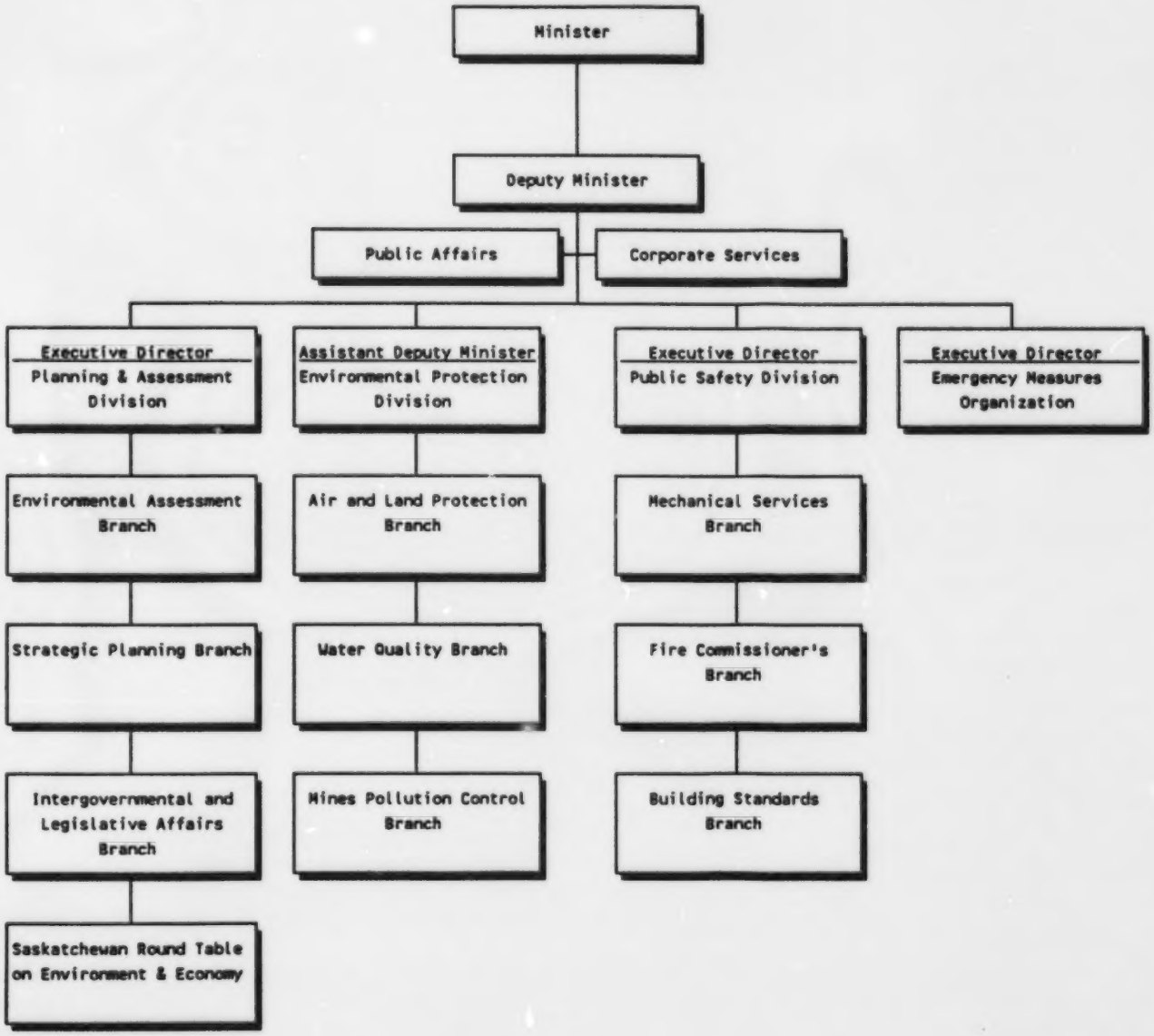
During my first full year as Deputy Minister, we launched many initiatives in organization, legislation, policy and planning, programming, and public involvement, information and education. New links were developed, for example, through public participation in our extensive landfill meetings, preparing the Great Sand Hills Land Use Strategy, reviewing the environmental assessment process, and revising mineral industry environmental protection regulations. Throughout, we have re-directed the department's focus to partnerships and integrated planning in order to begin building a broad consensus on environmentally sustainable economic development in Saskatchewan.

I thank the dynamic staff for contributing to the success of the department in ensuring the environmental well-bein of the province. I look forward with enthusiasm and commitment to fulfilling the vision we started.

Respectfully submitted

Les Cooke
Deputy Minister

Organization Chart



Department Mandate

The mandate of Saskatchewan Environment and Public Safety is threefold:

Environmental Protection

- To protect and enhance the environment in a manner that promotes the physical, economic and social well-being of the people of Saskatchewan today and in the future.

Public Safety

- To provide and maintain safety standards for industry and the general public in the fields of boiler and pressure vessel installations; elevator and amusement ride installations; building and accessibility standards*; fire safety * and licensing of persons engaged in work of gas and electrical installation.

Emergency Measures *

- To develop and maintain an effective emergency response capability at the provincial and municipal levels of government to ensure the survival and recovery of our citizens and communities from any peacetime emergency or disaster.

* transferred to Saskatchewan Community Services effective January 1, 1991.

Legislation

The following acts were administered by Saskatchewan Environment and Public Safety in the 1990-91 fiscal year :

The Clean Air Act
The Ecological Reserves Act
The Emergency Planning Act *
The Environmental Assessment Act
The Environmental Management and Protection Act
The Litter Control Act
The Water Appeal Board Act
The Amusement Rides Safety Act
The Boiler and Pressure Vessel Act
The Electrical Licensing Act
The Fire Prevention Act *
The Gas Licensing Act
The Passenger and Freight Elevator Act
The Uniform Building and Accessibility Standards Act *

Planning and Assessment Division

Mission

To plan for the protection and enhancement of the environment; to assess proposed development projects to ensure consistency with environmental protection; to facilitate intergovernmental co-operation on environmental matters; to develop progressive environmental laws, regulations and procedures; and, to establish the principles of sustainable development to maintain the physical, economic, and social well-being of the province and its people, now and in the future.

Activities

Planning and Assessment activities are concentrated in four branches reporting directly to the executive director.

- Environmental Assessment Branch
- Strategic Planning Branch
- Saskatchewan Round Table on Environment and Economy
- Intergovernmental and Legislative Affairs

Environmental Assessment Branch

Objectives

- To have prospective developers fully informed about Saskatchewan's environmental protection policies and regulatory requirements.
- To have all plans for future development activities in or near Saskatchewan fully evaluated as to the acceptability of their likely environmental implications before commitments to proceed with those plans are made.
- To have in Saskatchewan a system of ecological reserves which exemplify and protect both unique and typical aspects of the province's natural heritage.

Activities

- Apprise prospective developers of provincial environmental requirements applicable to their development proposals, particularly those requirements under legislation administered by Saskatchewan Environment and Public Safety.
- Administer Saskatchewan's environmental assessment process in accordance with requirements and provisions of the province's *Environmental Assessment Act*, and in so doing:
    - review preliminary development concepts to help prospective developers identify potential environmental and socio-economic problems, and define the scope of any assessments which might be necessary to satisfactorily address those problems and produce environmentally sound development plans;
    - review each Environmental Impact Statement (EIS) submitted to the department by a developer seeking Ministerial Approval under *The Environmental Assessment Act*, to ensure that the document provides a technically sound basis for public evaluation on the proposed development's likely environmental implications and the Minister's subsequent decision regarding if and how it may proceed;
    - facilitate public examination of and comments on each EIS in accordance with the requirements and provisions of *The Environmental Assessment Act;*
    - recommend to the minister conditions of approval for each new development to improve its environmental acceptability; and
    - monitor the implementation of plans approved under *The Environmental Assessment Act* to ensure compliance with the terms and conditions of their approvals, and recommend appropriate action in any case where a developer fails to comply with those terms or conditions.
- Administer Saskatchewan's *Ecological Reserves Act*, and in so doing:
    - identify areas of the province worthy of reserve status;
    - arrange for official designation of those areas; and
    - establish conditions under which the reserves are to be managed and protected.
- Represent the department on inter-agency and inter-jurisdictional committees and study teams attending to multi-disciplinary environmental matters of importance to Saskatchewan.
- During the 1990-91 fiscal year, 78 new development proposals were submitted to the branch for formal review through the environmental assessment process. In addition, reviews of 34 proposals carried over from previous years continued in 1990-91. The status of the various proposals received or under review during the fiscal year was as follows:

Table 1
Projects Undergoing an Impact Assessment or Undergoing Screening at Year End

Proponent	Project
Amok Ltd.	In Lake Pit Development (uranium mining)
Amok Ltd.	Off Lake Pit Development (uranium mining)
Cameco	Contact Lake Gold Mine Development
Cameco	Hanson Lake Copper-Zinc Sulphide Deposit
Cigar Lake Mining Corporation	Permanent Access Road
Cigar Lake Mining Corporation*	Waterbury Lake Uranium Development
City of Regina	Waste Management Study
Curtis Construction Ltd.	Pesticide Container Storage and Cleaning Facility, Naicam area
Denison Mines Ltd.	Midwest Joint Venture Uranium Project
Esso Petroleum Canada	Hazardous Waste Receiving and Transfer Station, Regina
Estevan Coal Corporation	Shand Coal Mine
International Minerals and Chemical Corp. Ltd.	Satellite Potash Mine, Esterhazy
Lone Pine Resources Ltd.	Gas Field Development, Crane Lake North-Freefight Lake Area
Minatco Ltd.	McClean Lake Uranium Development
Monsanto Canada Inc.	Agricultural Research Farm Site, Saskatoon area
Nai-Chem Ltd.	Pesticide and Herbicide Container Refill Project, Naicam area
NorSask Biomass Corporation	Jans Bay Biomass Power Project
North Canadian Oils Ltd.	Bigstick Lake Gas Development Project
Ocelot Industries Ltd.	1989 Sand Hills Gas Development Program

* Baseline studies are currently being carried out for this project - a decision to proceed with the project has not as yet been made by the proponents.

Table 1 continued

Proponent	Project
Saskatoon Service for Seniors Inc.	Community Compost Project, Saskatoon
SaskOil	Exploratory Gas Well, Merryflat area
SaskPower	Ash Storage Site, Shand Power Station
SaskPower	230 kV Transmission Line, Brada to Lloydminster
SaskPower	230 kV Transmission Line, Brada to Meadow Lake
SaskPower	230 kV Transmission Line, Shand to Peebles
Shell Canada Ltd.	Midale Phase One, Carbon Dioxide Project (EOR)
Sceptre Resources Ltd.	Crane Lake Gas In-Fill Project
The Arctic Fish Company	Cage Culture Fish Production Operation, Lake Diefenbaker
TransCanada Pipelines Ltd.	Western Canada Research Facility, Natural Gas Release Test, Morse area
TransGas Ltd.	Gas Supply Pipeline, Husky Heavy Oil Upgrader

Table 2
Projects Screened - Impact Assessments Not Required

Proponent	Project
Bio-Waste Management Ltd.	Organic Waste Composting Plant, Saskatoon area
Cameco	Modifications to Key Lake Tailings Management Facility
Chauvco Resources Ltd.	Heavy Oil Extraction Project, Manito Lake area
Co-Max Energy Group Inc.	Brine Disposal Site, Burstall area
C.S. Resources	Heavy Oil Horizontal Drilling Program, South Winter (Manito Sand Hills)
Ducks Unlimited Canada	Connel Wetland Development Project
Ducks Unlimited Canada	Lake No. 1 Wetland Development Project
Ducks Unlimited Canada	MacDonald Creek Wetland Development Project
Ducks Unlimited Canada	Marshall Extension Wetland Development Project
Ducks Unlimited Canada	Remeshylo Wetland Development Project
Ducks Unlimited Canada	Rink Wetland Development Project
Ducks Unlimited Canada	Springside Marsh Wetland Development Project
Ducks Unlimited Canada	Thunder Creek Marshes Wetland Development Project
Ducks Unlimited Canada	Thunder Creek South Wetland Development Project 4710
Ducks Unlimited Canada	Thunder Creek South Wetland Development Project 4712
Ducks Unlimited Canada	Thunder Creek South Wetland Development Project 4714
Ducks Unlimited Canada	Trapp Wetland Development Project
Elk Ridge Golf and Conference Centre Ltd.	Golf Course and Conference Centre, McPhee Lake
Enduro Panel Ltd	Insulation Panel Manufacturing Plant, Regina
Enviroclean Recycling Ltd.	Organic Solvent Distillation Plant
Enviropulp Products Ltd.	Waste Paper Recycling Plant, Bradwell
Hudson Bay Mining and Smelting	Metallurgical Complex Renewal, Flin Flon area

Table 2 continued

Proponent	Project
Husky Oil	Revisions to the Husky Heavy Oil Upgrader
Jacobsen Bay Outfitters Ltd.	Four Season Recreational Resort, Anglin Lake
Kelvington Processors Ltd.	Snack Food Processing Plant, Kelvington
Lone Pine Resources Ltd.	Freefight Lake Gas Development, Phases 3 and 4
Lone Pine Resources Ltd.	Phase 2 Gas In-Fill Project, Freefight Lake area
Mark Resources Inc.	Brine Disposal Site, Fox Valley area
Mark Resources Inc.	Exploratory Oil Wells, Minton/Big Muddy area
Mark Resources Inc.	Oil Development Program, Minton/Big Muddy area
Mark Resources Inc.	Pipeline Gathering System, Big Muddy area
Miller Hatcheries	Poultry Processing Facility, Asquith
Millar Western Pulp Ltd.	Water Supply Modifications, Meadow Lake Pulp Mill
Mistik Management Ltd.	Highway 903 Extension (Forest Haul Road)
Norquay Alfalfa Processors Ltd.	Alfalfa Processing Facility, Norquay
North Canadian Oils Ltd.	Brine Disposal Pond, Golden Prairie
North Canadian Oils Ltd.	Produced Fluids Disposal Site, Maple Creek area
North Canadian Oils Ltd.	Produced Water Holding Tanks, Hatton South Field
Ocelot Industries Ltd.	Gas In-Fill Drilling Project, Bigstick Lake area
Poco Petroleums Ltd.	Fusilier Natural Gas Plant, Kindersley
Potash Company of America	New Injection and Exploration Wells, Patience Lake
Potash Company of America	Submerged Combustible Heater System
Pound-Maker Ethanol Ltd.	Ethanol Production Facility, Lanigan
Redvers Agriboard Industries Ltd.	Strawboard Manufacturing Plant, Redvers
Re-Solvv Recycling Inc.	Solvent Recycling Operation, Regina

Table 2 continued

Proponent	Project
R. & L. Gane	Resort/Subdivision Development, Tobin Lake
Royex Gold Mining Corp.	Muskeg Treatment of Tailings Effluent, Jolu Gold Mine
Saskatchewan Pasta Corp.	Flour Mill/Pasta Manufacturing Plant, Swift Current
Saskatchewan Water Corporation	Pump Plant and Water Pipeline, Buffalo Pound Lake to Saferco Site
Saskatchewan Wheat Pool	Elevator and Farm Supply Warehouse, Humboldt area
Sask Energy	1990 Rural Gasification Program
SaskOil	Access Road Upgrading, Meadow Lake Provincial Park area
SaskOil	Beacon Hill Gas Development Project, Phase II
SaskOil	Brine Disposal Tanks, Hatton Field
SaskOil	Cold Lake Gas Field Development
SaskOil	Exploratory Gas Wells, Merryflat area
SaskOil	Hatton In-Fill Flow Line Project, Bitter Lake area
SaskOil	Hatton In-Fill Gas Well Drilling Project
SaskOil	In-Fill Gas Well Drilling Project, Antelope area
SaskOil	Plover Lake EOR Project, Phase II
SaskOil	Primrose Air Weapons Range, Four Gas Wellsites
SaskOil	Primrose Gas Production Project
SaskOil	Winter Heavy Oil Drilling Project, Phase II
SaskPower	Cooling Water Supply Pipeline and Cooling Source, Shand Generating Station
SaskPower	Greenhouse Development, Shand Power Station
TransGas Ltd.	Natural Gas Pipeline, Regina to Rosetown
Tri-Link Resources	Oil Well Development, Swift Current area
Trucena Investments Ltd.	Exploratory Well Site, Great Sand Hills
Weyerhaeuser Canada Ltd.	Sawmill West Forest Haul Road

Table 3
Assessment Process Completed

Proponent	Project
Cameco	Rabbit Lake "In-Pit" Tailings DisposalSystem
Claude Resources Inc.	Gold Mine Development, Laonil Lake area
Saferco Products Inc.	Nitrogen Fertilizer Manufacturing Plant, Belle Plaine, Saskatchewan

Table 4
Projects Deferred or Cancelled

Proponent	Project
Amok Ltd.	Cluff Lake Waste Rock Management Study
Atomic Energy of Canada Ltd.	Slowpoke Reactor Energy System, Saskatoon
Cameco	Gold Mine Development, Preview Lake
Ekaton Industries Inc.	Kaolin Open Pit Mine and Mill, Wood Mountain area
Lenora Explorations/Mary Ellen Resources Ltd.	Open Pit Gold Mines, Uranium City
Nortek Forest Products Corp.	Nipawin Pulp Mill
R.T. Oilfield Enterprises Ltd.	Oilfield Waste Processing Plant and Landfarm, Kindersley
Rural Municipality of Hoodoo	Wakaw Lake Weir
Sussex Environmental Services Ltd.	Liquid Waste Recycling and Recovery Project, Regina
Tirecycle Products Inc.	Tire Recycling Facility, Regina

Other Reviews

In addition to 112 projects undergoing formal environmental assessment review, the Environmental Assessment Branch was involved in the review of a large number of additional project proposals. These proposals included 39 referrals from Saskatchewan Water Corporation, 7 proposals related to sand and gravel projects, 11 forest cutting plans, 18 Treaty Indian Land Claims, approximately 50-60 miscellaneous referrals and many proposals related to oil and gas developments.

Environmentally sensitive lands affected by proposed sales of petroleum and natural gas rights were screened. Environmentally sensitive rangelands, northern forest areas, and dune sand areas were screened in order to advise potential purchasers of mineral rights of environmental concerns and review and environmental protection requirements prior to their making purchase decisions.

Committees Studies

Ecological Reserves

During the fiscal year of 1990-91, the Environmental Assessment Branch continued work of setting priorities for creating new ecological reserves. Draft regulations were prepared for the Qu'Appelle Coulee site north of Wolseley, and the Rafferty Buffalo Grass Prairie east of Estevan. Designation is pending resolution of mineral rights.

Wetlands Technical Advisory

The Branch continued to represent Saskatchewan Environment and Public Safety on the Wetlands Technical Advisory Committee. The purpose of this committee is to review proposals for water development projects which might affect waterways, lakes and wetlands, to resolve any conflicts which might arise among wildlife, fisheries, agricultural and environmental interests and to encourage development of works which are in the best interest of the Province of Saskatchewan. The committee also includes representatives from the departments of Agriculture, Parks and Renewable Resources, Rural Development and the Saskatchewan Water Corporation. During the 1990-91 fiscal year, 40 projects were reviewed by the Wetlands Technical Advisory Committee.

Environmental Guidelines

The Branch continued to distribute environmental protection guidelines pertaining to roads, transmission lines, mineral exploration, sand and gravel pits, heavy oil projects, seismic programs and environmental protection guidelines for oil and gas exploration and development on environmentally sensitive lands.

A review of seismic guidelines was initiated and interim guidelines for seismic exploration in the Manito Sand Hills prepared.

Protection of Environmentally Sensitive Lands

On an ongoing basis, staff of the Environmental Assessment Branch endeavour to identify environmentally sensitive areas within Saskatchewan, assess their vulnerability to different types of development activity and establish mitigation guidelines for prospective developers to follow in those parts of the province where development is expected to continue or increase.

Considerable effort was once again expended in 1990-91 in working with affected oil and gas companies, consultants, and other provincial and local government agencies in ensuring that proposed oil and gas projects in environmentally sensitive rangelands, forest areas and dune sands were implemented in an environmentally acceptable manner. Emphasis was placed on project planning by the proponent, a process designed to assure that developers took responsibility for developing and implementing their own environmental protection plans as an integral part of their overall projects. In 1990 one proponent initiated an environmental impact assessment for a natural gas development project in the Great Sand Hills. Two assessments for gas development in that area, initiated in 1989-90, continued in 1990-91.

Existing co-operative arrangements were maintained with Saskatchewan Rural Development and Saskatchewan Energy and Mines and other affected agencies to facilitate environmental review of all development activities proposed for the most sensitive lands. Close liaison was also maintained with Saskatchewan Parks and Renewable Resources as that department has developed policies for oil and gas exploration and development on parks and resource lands.

Reform of *The Environmental Assessment Act*

The Saskatchewan Environmental Review Commission (SEARC) was appointed in August, 1990. Members of the Commission were Marie-Ann Bowden (Chairperson), Bert Weichel and Don Somers.

The mandate of the Commission was to review the current Saskatchewan Environmental Assessment and Review Process and *The Environmental Assessment Act*. The Minister requested recommendations for changes to the process and to legislation as well as background and rationale for each suggestion.

To accomplish this task, SEARC researched environmental and legal practices across Canada. It also held meetings throughout Saskatchewan to hear concerns of the public before drafting their recommendations.

On February 27, 1991, SEARC presented its report - "Environmental Challenges" - to the public and to the Minister. The report made 162 specific recommendations for a fundamental reform of The Environmental Assessment and Review Process. Following receipt of the report, the Branch began a review of the recommendations in co-operation with other affected departments of government. The purpose of the review is to produce a "White Paper", draft legislation which will be distributed for a full public review.

Strategic Planning Branch

Objectives

- To ensure that existing and developing environmental management and protection issues are addressed by the department and the Province.
- To develop comprehensive policies and planning strategies to meet both short-and long-term program goals.

Activities

- Develop and implement new environmental initiatives.
- Coordinate the development of environmental management programs in the department and among other government agencies.
- Monitor new environmental developments and initiatives in the government, industry and the private sector.
- Identify economic development opportunities directly related to environmental concerns.
- Coordinate the department's involvement with the Canadian Council of Ministers of the Environment (CCME).
- Provide technical and administrative support to Saskatchewan's Round Table on Environment and Economy.
- Communicate with agencies and the public on matters pertaining to the environment.

Data Centre For Ecological Information

The branch has taken the lead role in evaluating a proposal by the Nature Conservancy of Canada and the U.S. Nature Conservancy to establish an Ecological Data Centre in Saskatchewan. This centre would collect and store information on threatened and endangered species and ecosystems.

Establishment of the centre has been recommended. The Saskatchewan Round Table on Environment and Economy agreed to cost-share the development of the centre with the Nature Conservancy of Canada. The Data Centre is expected to be in operation in the fall of 1991.

Climate Change Study

The branch continued the development of a strategy to mitigate, and where possible, take advantage of the economic and environmental impacts of climate change in the province. This strategy will provide direction for the government in the management of the province's resources and environment as they relate to climate change and variability.

Comprehensive Approach for Waste Management

The branch is assisting in the development of a Waste Minimization Strategy for the Province. The proposed strategy will address all the Province's waste streams in an integrated manner. All of these initiatives developed under this strategy embrace the hierarchy of responsible waste management, which identifies waste reduction as the preferred practice, followed by reuse, recycling, and recovery (the 4 Rs).

The following, are waste minimization projects that are either complete, or will be completed in the near future:

The Waste Minimization Act

The Branch is assisting in the development of *The Waste Minimization Act*. The Act is intended to provide the Government with the legislative tools necessary to carry out the Waste Minimization Strategy.

Waste Dangerous Goods Management Plan

The Branch is assisting with the development of a comprehensive plan to manage hazardous waste (waste dangerous goods). Waste treatment and disposal will only be identified as options in cases where alternatives from the 4 Rs are not available or economically viable, and when treatment and disposal can be undertaken in a manner that protects human health, safety and the environment.

Solid Waste Management

The branch is assisting with the development of a strategy to reduce solid waste. A consultant will be employed to identify waste reduction and recycling options. The strategy is expected to be complete in summer of 1992.

Biomedical Waste

The branch has been assisting with the development of a biomedical waste management strategy. This strategy will address the proper collection, storage, transportation, treatment and disposal of biomedical waste generated in Saskatchewan. It will also investigate opportunities to reduce the quantities of waste destined for treatment and disposal.

Pilot Blue Box Recycling Project

The branch has been responsible for assisting with the selection of communities to test a pilot blue box program. Two municipalities, Swift Current and Lloydminster, have been selected to conduct independent Pilot Blue Box Recycling Projects. The projects will assist the department to develop and implement a successful province-wide recycling program.

Clean Air Strategy

Development of a Clean Air Strategy is underway to maintain and protect Saskatchewan's air quality. The strategy will focus on reducing levels of greenhouse gases, sulphur dioxide and nitrogen oxide while sustaining economic development. Clean air initiatives will be developed cooperatively with provincial and federal agencies.

Conservation Strategy Development

The branch played an important role in assisting with the development of the Provincial Conservation Strategy. Accomplishments include developing an outline for the strategy, assisting with the formation and facilitation of sector advisory groups and reports, and providing research and writing support in preparing the draft Conservation Strategy, which will be released in the fall of 1991.

Great Sand Hills Land-Use Strategy

The branch, through an inter-governmental committee, coordinated the development of a land-use strategy for the Great Sand Hills region of southwest Saskatchewan. A study was undertaken to determine appropriate land uses for this unique area.

Specific development and reclamation guidelines were established for the Great Sand Hills area. Four areas within the Great Sand Hills were zoned as Prime Protection Zones, where development of natural gas will not be permitted.

Geographic Information System Pilot Study

The branch is involved in an inter-agency Geographic Information System (GIS) resource study. The study is to determine the potential of GIS to manage Saskatchewan's natural resources. The ability to share computer-stored information among several agencies will be tested during the study.

The Green Plan

The branch is responsible for coordinating the Provincial Government's response to the Federal Green Plan. The Green Plan contains numerous initiatives to be implemented over the next five years across Canada. Currently, the branch is consulting with provincial and federal agencies to determine the joint priorities for implementation of these initiatives in Saskatchewan.

Safe Drinking Water Quality Strategy

The branch is assisting Water Quality Branch to develop a strategy to ensure municipal water systems can meet recently revised drinking water quality objectives. The objectives are designed to protect public health in terms of water used for drinking and domestic purposes. The process of developing a strategy involves consultation with other provinces to develop options that meet municipal needs.

Operator Certification Strategy

The branch is assisting with the review of the voluntary municipal water and wastewater operating program now in place, to determine if some form of mandatory operator certification is needed. Well-trained operators are necessary to provide municipalities with good water/wastewater treatment.

Environmental Workplace Initiatives

The branch is involved in introducing environmentally responsible practises into government offices. The intent of this program is to apply the 4 Rs within government offices to minimize the effect of their operations on the environment. Major initiatives include reduction of paper use, paper recycling, energy conservation, and an environmentally responsible purchasing policy.

State Of The Environment Report

In 1991, the Government of Saskatchewan released its first State of the Environment Report (SOE). The branch was responsible for coordinating development and production of the SOE Report. This report is intended to provide a base-line evaluation of Saskatchewan's environmental condition. Subsequent reports will serve to evaluate any progress made to improve environmental protection.

The branch is currently providing logistic support to an independent committee that has been established to evaluate the SOE Report. The committee will make recommendations to improve future SOE reports.

Environment Youth Corps Program

The Environment Youth Corps Program was established in 1990 to provide students with experience with environmental management. The branch was responsible for coordinating the distribution of funds for the program, and for determining eligible positions for students.

Uranium Board of Inquiry

The branch provided assistance to the Environmental Assessment Branch in establishing a joint federal-provincial Uranium Board of Inquiry. The Inquiry will review Environmental Impact Statements (EIS's) for several proposed uranium mine developments in northern Saskatchewan.

Public Education

The branch frequently accepts invitations to speak to school or university students, and other organizations. Lecture topics have included soil conservation issues, sustainable development in the energy sector, and recycling opportunities.

Committees And Boards

Members of the branch participated in a variety of committees and boards including:

Saskatchewan Wetlands Conservation Corporation
Deputy Ministers' Committee on an Integrated Environmental Strategy
Energy and Mines Environmental Protection Strategy Committee
Saskatchewan Endangered Spaces Committee
Soil Conservation Society
Canadian Council of Ministers of the Environment Task Force on Economic Instruments
Canadian Council of Ministers of the Environment Task Force on International Agendas

Saskatchewan Round Table on Environment and Economy

Established late in fiscal year 1988-89, the Saskatchewan Round Table on Environment and Economy comprised 18 members. Membership at the end of 1990-91 had been reduced to 16.

Objectives

- To advise the premier of Saskatchewan on the integration of economic and environmental decision-making with the goal of achieving sustainable development in the province.

Activities

- To promote, explain and introduce the concept of sustainable development in all sectors of public and private development in the province.
- To establish a conservation strategy by the end of 1991, to ensure that the province's resources are used and protected in an environmentally, economically and socially sound manner. The development of this conservation strategy will be based on a process of consultation among government, industry, interest groups and the general public.
- To promote public awareness and understanding of the linkages between the environment and economy and the principles of sustainable development, which include:
  - developing a communication/ education plan;
  - promoting, monitoring and reporting on sustainable development demonstration projects; and
  - recognizing outstanding work on environment-economy integration and environmental excellence through the presentation of annual awards.
- The Round Table liaises with other provincial Round Tables and the National Round Table to ensure that its activities are co-ordinated and complimentary.
- The Round Table monitors and reports to the premier on Saskatchewan's progress in implementing the recommendations of the National Task Force on Environment and Economy.

Round Table Secretariat

Mission

- To support and advise the Saskatchewan Round Table on Environment and Economy in the conduct of its tasks.

Activities

- Guide and plan the work of the Round Table to ensure its objectives are met within its limited life.
- Organize and arrange all meetings of the Round Table and its Committees.
- Prepare meeting agenda materials through research, preparation of reports and analysis.
- Liaise with all other Round Table Secretariats in Canada to share experience and reduce duplication of efforts.

Round Table Organization and Meetings

The work of the Round Table is done in two committees:

- the Conservation Strategy Committee;
- the Communication/Education/ Demonstration Projects Committee.

The committees meet on an equivalent or greater frequency than the Round Table. The Round Table met five times in 1990-91.

Round Table Accomplishments

- Established Saskatchewan's first environmental awards program - The Awards of Environmental Excellence.
- Established and facilitated eleven sector advisory groups on the Conservation Strategy on Agriculture, Forestry, Mining, Energy Development, Tourism, Manufacturing, Transportation, Public Administration, Flora and Fauna, Households, and Construction and Development to produce reports on sustainability in each sector. Involved over 160 individuals and organizations.
- Maintained a strong liaison role with other Round Tables and served as organizational support to the First National Joint Meeting of Round Tables held in Winnipeg in April, 1990.
- Initiated an Education Advisory Committee to advise the Round Table on formal and informal education for sustainable development.
- Supported financially the Youth Education Project of the Saskatchewan Environmental Society.

Table 5
Saskatchewan Round Table on Environment and Economy Membership, March, 1991

Name	Affiliation
Frank Arnie	Saskatchewan Wildlife Federation
Doug Chekay	Ducks Unlimited
Chief Roland Crow	Federation of Saskatchewan Indian Nations
Bill Gaynor	Saskatchewan Division of Weyerhaeuser Canada Ltd.
Hon. John Gerich	Associate Minister of Economic Diversification and Trade
Professor Jon Gillies	Faculty of Agricultural Engineering, University of Saskatchewan
Dr. David Henry	Associate Professor of Science, Saskatchewan Indian Federated College
Hon. Grant Hodgins	Chairman, Minister of Environment and Public Safety
Dr. Stuart Houston	Professor of Radiology, Department of Medical Imaging, University of Saskatchewan
Sister Phyllis Kapuscinski	Faculty of Education, University of Regina
Hon. Lorne Kopelchuk	Minister of Parks and Renewable Resources
Hon. Raymond Meiklejohn	Minister of Education
Lindsay Milne	Husky Oil Operations Ltd.
Ken Naber	Reeve, R.M. of Star City
John Nightingale	Cigar Lake Mining Corporation
Bert Weichel	Saskatchewan Environmental Society

Intergovernmental and Legislative Affairs

Objectives

- To facilitate intergovernmental environmental co-operation and harmonization.
- To develop progressive environmental legislation and regulations to preserve and protect the environment.

Activities

- Develop Accords, agreements, legislation and regulations to facilitate co-operation and harmonization with other jurisdictions and orders of government.
- Develop an Enforcement Policy that emphasizes responsible stewardship of the environment, anticipation, prevention, protection and fair application to everyone.
- Reform legislation and regulations.
- Co-ordinate enforcement activities.
- Co-ordinate enforcement training.

Intergovernmental Co-operation and *Harmonization*

The branch is involved both nationally and regionally with representatives of other orders of governments to facilitate interjurisdictional co-operation, harmonization, avoidance of duplication and information sharing, and therefore participates in the:

Canadian Council of Ministers of the Environment (CCME) Assessment Harmonization Task Force to facilitate interjurisdictional environmental assessment co-operation and harmonization and in the development of Bill C-13 The Canadian Environmental Assessment Act and its regulations.

Canadian Environmental Enforcement Committee, composed of representatives of the federal, provincial and territorial departments with environmental enforcement jurisdiction, to facilitate co-operation in environmental enforcement.

CCME Environmental Liability Task Force to facilitate harmonization of environmental liability.

Environment Canada (Northern & Western Region)/Saskatchewan Environment and Public Safety Joint Committee to facilitate environmental co-operation and harmonization regionally.

Uranium Board of Inquiry

The branch participated in the development of a Joint Federal/Provincial Uranium Environmental Assessment Board of Inquiry to review several proposed uranium mine developments in the province.

Enforcement Policy

The branch has the lead role in the development of an enforcement policy through public and stakeholder involvement which when adopted will be published. It will emphasize responsible stewardship of the environment by everyone, the anticipation and prevention of environmental harm and the air and equal application to all.

Enforcement

Enforcement activities and legal services to facilitate these activities are co-ordinated by the branch.

Enforcement training and education is also co-ordinated by the branch.

Legislation and Regulations

The enforcement policy sets the scope and the direction of environmental enforcement legislation and regulatory reform.

Environmental assessment legislation review and reform is at the forefront of the branch's activities.

Waste Management Strategies will require legislative and regulatory changes. Draft waste minimization enabling legislation was prepared to assist in the identification of legal mechanisms for the development and implementation of strategies for all waste streams.

The branch assisted in the development and passage of The Mineral Industry Environmental Protection Regulations which apply to the entire mineral industry in Saskatchewan including uranium commencing prior to the start of exploration through to decommissioning and reclamation. Bonding and financial assurance regulation development will be the next step.

Intergovernmental initiatives on cooperation and harmonization have been reviewed for legislative and regulatory requirements to determine required amendments.

The branch is building in rationalization and reform of legislation and regulations to ensure harmonization of departmental legislation and regulations.

The branch also monitors legal issues and legal trends of other jurisdictions.

Education

The branch participates in public education programs on Saskatchewan environmental legislation and regulations for students, professionals and the public.

Information on legislation and regulation is provided to various organizations, governments and individuals.

Committees

In addition to participation in interjurisdictional committees already mentioned, the branch chairs the following internal committees:

- Legal Affairs Committee
- Enforcement Policy Task Force
- Environmental Liability Task Force

Environmental Protection Division

Mission

To protect and enhance the environment in a manner that promotes the physical, economic and social well-being of the people of Saskatchewan today and in the future.

Activities

Environmental protection activities are concentrated in three branches reporting directly to the assistant deputy minister.

- Air and Land Protection Branch
- Water Quality Branch
- Mines Pollution Control Branch

Air and Land Protection Branch

Objectives

- To prevent air pollution from industrial and other sources.
- To promote rehabilitation of polluted or disturbed lands.
- Management of programs to recycle pesticide containers.
- To preserve and enhance the environment by managing land use activities.
- To reduce the amount of waste requiring disposal by encouraging and assisting the application of 4R initiatives (reduce, reuse, recycle and recover).

Activities

- Issue Permits to Operate in accordance with *The Clean Air Act* for industrial sources, fuel-burning equipment and incinerators.
- Continuously monitor the air quality in urban and rural areas of the province. Investigate air quality complaints and encourage industry to reduce emissions of air pollutants to the lowest practical levels.
- Safeguard the physical and living environment in the event of storage or spill of hazardous substances.
- Provide advice on risks to public safety and property in the event of a deliberate or accidental discharge of hazardous substances into the environment.
- Assess degree of contamination of lands as a result of accidental or intentional release of chemicals.
- Encourage waste reduction, recycling, reuse and recovery.
- Regulate environmentally acceptable storage, treatment and disposal of waste to land.
- Identify degradation pathways and potential impacts on the environment as a result of the use of toxic chemicals.

Air Quality Section

Legislation

The Ozone Depleting Substances Control Act became effective on January 1, 1991. The legislation will enable the department to control and phase out chloroflourocarbons (CFC's) and halons. Immediately banned was the use of CFC's as a propellant, except in medical applications and the manufacture and sale of packaging or wrapping containing CFC's Regulations designed to phase in the elimination of ozone-depleting substances is currently being drafted. The recharging, recycling, collection and storage of CFC's will also be addressed in the new regulations which are due to come into effect before the end of 1991.

Industrial Surveillance Activities

During the fiscal year, 22 new permits to operate were issued under *The Clean Air Act,* and 89 permits were renewed. Figure 1 illustrates the growth in the number of permits issued since 1975. Table 1 provides a breakdown of the industrial classifications of the permits handled during the year.

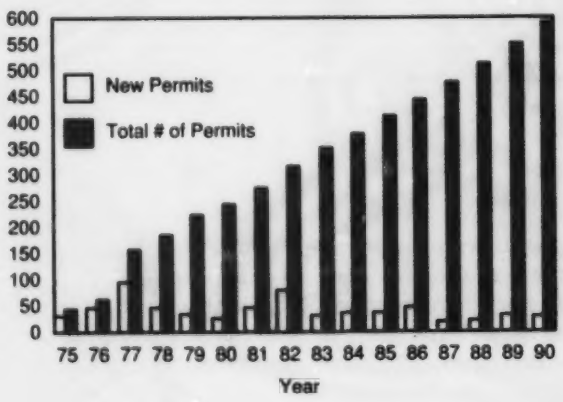
Table 6
Classification of Permits

	New	Renewals	Cancelled
Agricultural Chemical Formulating Plant	-	-	-
Anhydrous Ammonia Storage Facilities (Bulk)	-	1	-
Asphalt Plants	1	21	-
Bulk Blending Fertilizer Facilities	-	3	-
Chlorine Packaging Fertilizer Facilities	-	-	-
Chemical Manufacturing	-	-	-
Crematoriums	-	-	-
Gas & Oil Gathering and Treating Facilities	1	5	-
Gas & Oil Compressor Facilities	-	6	1
Grain Elevators	5	43	-
Incinerators	8	-	-
Iron/Steel Foundries	-	-	-
Cement/Concrete Manufacturing Facilities	-	-	-
Salt Drying Facilities	1	2	-
Seed Cleaning & Treating Facilities	1	5	-
Oil Refineries	-	-	-
Miscellaneous	3	1	1
Total	**20**	**87**	**2**

Selected major industries are required to monitor emissions and/or ambient air quality near their operations as a result of conditions attached to their permits to operate. the results of these monitoring efforts are submitted to the section for review. For the most part, monitoring results are well within provincial standards and requirements.

Section personnel conduct numerous formal inspections of industries which are under permit. During these inspections, staff members verify whether processes and equipment are operating in the intended/expected manner. Any complaints or problems are discussed and areas for improvement or changes are negotiated. In addition to formal inspections, branch personnel also visit numerous industries and other operations on a random, informal basis. The purpose of these visits is to ensure that appropriate follow-up measures are put in place in those situations where improvements were previously agreed upon.

Figure 1
Industrial Permits Issued 1975-1990



Urban Air Monitoring

The section conducts air monitoring in the province to assess present conditions, review long-term trends and evaluate effectiveness of air pollution control equipment. The data collected also enables the section to evaluate air quality complaints and compliance with air quality standards.

At urban air monitoring network centres around Regina and Saskatoon, air quality parameters typically measured may include hydrogen sulphide, sulphide dioxide, ozone, carbon monoxide, oxides of nitrogen, inhalable particulate matter and wind.

Inhalable particulate matter sampling is also carried out in other parts of the province. Results of air quality measurements made during 1990-91 were similar to those made in the previous fiscal year. Air quality can be rated as fair to good. The provincial air quality monitoring data for 1990-91 may be made available from Saskatchewan Environment and Public Safety on request.

In addition to the urban air monitoring program, the Section monitored air quality around the Consumers' Co-operative Refinery/Upgrader in Regina and near the Saskatchewan Power Corporation plant at Poplar River. A number of industries were also required to carry out ambient air monitoring as a condition of their Permit to Operate.

Acid Rain

Saskatchewan Environment and Public Safety is a member of the Western Canada Long-Range Transport of Atmospheric Pollutants Technical Committee. The committee plans and co-ordinates acid deposition research and monitoring programs for Western Canada. An annual report outlining the acid rain activities in Western Canada during 1990 is available from Saskatchewan Environment and Public Safety on request.

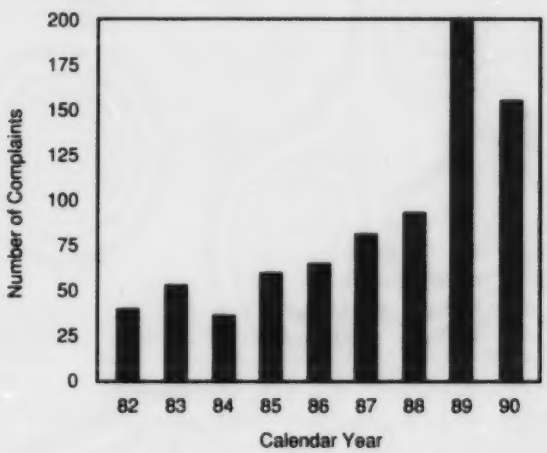
The section is participating with the other Western Provinces to develop sulphate deposition target loadings for sensitive areas in Western an Northern Canada.

Complaints Investigation

The Air Quality Section received and investigated 157 air quality complaints during the 1990-91 fiscal year. This represents a decrease of approximately 36 per cent from the previous year.

The majority of complaints related to odours, smoke and dust in the ambient air. Operational activities of oil refineries, heavy oil upgraders, salt drying plants, asphalt plants, grain elevators, steel foundries and other industrial activities were cause for most of the complaints. In a number of cases, changes to operating procedures were sufficient to resolve the complaint. In certain cases, however, detailed evaluations were necessary before operational or equipment changes could be implemented. Figure 2 illustrates the number of complains handled for the period of 1982 to 1990.

Figure 2
Air Quality Complaints 1982-1990



Waste Management Section

Spill Response Centre

Saskatchewan Environment and Public Safety is responsible for the enforcement of the Environmental Spill Control Regulations which are designed to safeguard the environment in the event of a spill. The regulations require that spills of pollutants be reported immediately to the department's Spill Report Centre to ensure proper containment, clean up and disposal of contaminated material.

Spill Report Centre personnel are available 24 hours a day. When a spill is reported, personnel determine if adequate measures have been taken to clean up the spill and may also provide advice and/or instructions on further work if required. The spill team is equipped to make on-site inspections, determine if appropriate actions are being taken, and to advise on disposal requirements.

During the year, the Spill Report Centre received approximately 1200 calls. Three hundred and fifty-nine of the calls were to report spills, and 276 of those calls were defined as spills according to the Environmental Spill Control Regulations. In addition, the Spill Report Centre dealt with numerous complaints, performed assorted environmental investigations, and provided information regarding chemical handling and disposal.

Table 7 illustrates the cause of spills reported, the number of incidents associated with that cause and the total volume spilled.

Table 7
Spill Statistics by Cause, Number of Incidents and Quantity

Cause	Number of Incidents	Quantity (litres)
Transportation (truck, railway, etc.)	37	307,380
Handling	33	48,950
Equipment Failure	87	2,388,803
Above-ground tanks (overflows)	35	83,509
Below-ground tanks (line leaks)	49	3,345,442
Miscellaneous (lightning)	35	10,334,137
Total	**276**	**16,508,221**

Table 8 summarizes the spill statistics according to the type of material spilled, the number of incidents associated with that material and the total quantity of spilled material.

Monthly summaries of spills reported to the Spill Report Centre are provided in the publication "Environment and Public Safety Today".

Table 8
Spill Statistics by Product, Number of Incidents and Quantity

Product Spilled	Number of Incidents	Quantity (litres)
Petroleum Products		
Asphalt	9	83,844
Crude Oil	8	802,375
Diesel	51	101,303
Heating Oil	1	5,000
Gasoline	53	93,088
Transformer Oil (5 ppm)	6	2,100
Used Oil	5	630
Other	20	794,710
Subtotal	**153**	**1,883,050**
Non-Petroleum Products		
Acid	10	27,511
Fertilizer	9	45,867
Industrial Chemical	32	141,403
Industrial Waste	9	10,332,814
PCBs	35	336
Pesticides	7	559
Radioactive	6	32,800
Sewage	15	4,043,881
Subtotal	**123**	**14,625,171**
TOTAL	**276**	**16,508,221**

Industrial and Hazardous Waste Unit

The inappropriate management of dangerous wastes can result in the impairment of our environment or the endangerment of public safety. Such wastes are generated by industry, business, government and the general public and it is the Department's responsibility to ensure that the controls necessary for the safe handling, storage, transportation, treatment and disposal of these wastes are in place.

Legislation is in place which identifies the dangerous wastes that can cause environmental damage or endanger public safety. The Dangerous Goods Transportation Regulations currently contain a dangerous goods list identifying over 3,000 compounds which require special handling during transport. The regulations also have testing criteria that can distinguish dangerous mixtures or items that are not specifically listed. The compounds on the list or ones which meet the testing criteria are governed under the regulations and are termed dangerous goods. Once these compounds can no longer be used for their original purpose they are termed waste dangerous goods. These wastes are regulated by the Department to ensure proper handling and disposal practises. In Saskatchewan, therefore, the term **Waste Dangerous Goods**, rather than hazardous waste, is used to describe wastes which can pose problems for the environment or public safety. This terminology allows for the quick and accurate identification of wastes that require special handling and disposal without creating the sense of unwarranted fear usually associated with the term hazardous.

There is a growing awareness in industry and in the general public about the state of the environment and consequently the need for responsible waste management practices. The Department has witnessed a resulting demand for economical and environmentally sound disposal options. In response to this demand the Department has initiated the development of a waste management strategy to provide the long term solutions needed for Saskatchewan. As a practical interim step, given the limited availability of established disposal sites in this province, the Department has actively advocated the 4 Rs of waste minimization -- reduction, reuse, recycling and recovery-- and has provided direction with respect to utilizing out of province services.

Activities and inquiries, from both the public and private sectors, pertaining to the management of waste dangerous goods were dealt with by the Industrial and Hazardous Waste Unit. This Unit:

- dispensed information and oversaw the manifest system associated with the transportation of waste dangerous goods;
- inspected and assessed industrial sites, providing technical advice on environmentally sound practices;
- investigated complaints about the improper transportation and disposal of waste dangerous goods;
- evaluated contaminated site remediation projects and technical proposals for waste management technology development;
- provided technical advice on disposal options including 4R options and out of province services;
- oversaw the consolidation of PCB waste to the provincial storage facility;
- initiated permitting processes for waste management facilities and activities;
- reviewed federal draft regulations and guidelines concerning the import and export of hazardous wastes and PCB management.
- prepared environmental guidelines for the salvage industry; and
- participated on committees such as Canadian Council of Ministers of the Environment (CCME), Hazardous Waste Working Group, National Contaminated Sites Remediation Program and Western Task Force on Regional Waste Management.

Waste Dangerous Goods Management Plan

The Department has initiated the development of a comprehensive plan to manage Saskatchewan's waste dangerous goods. The plan will be based on the hierarchial 4 Rs of waste management--reduce, reuse, recycle and recover. The plan's development will consist of three components including strategy development, the development of waste dangerous goods regulations, and public and industry consultation. A steering committee, consisting of representatives from business, industry, government and interest groups, was formed to oversee the development of the plan. Saskatchewan businesses were surveyed, through mail out questionnaires and on-site waste audits, in order to develop a waste dangerous goods inventory for the province. The strategy development will continue with the identification of responsible waste management options for Saskatchewan for the wastes that were identified.

Industrial Permits

The Industrial and Hazardous waste unit began permitting industrial effluent works pursuant to *The Environmental Management and Protection Act*. These works include any operations for the collection, containment, storage, transmission, treatment or disposal of industrial waste. Twelve permits have been issued for activities ranging from waste chemical (solvent, battery and pesticide) collection facilities, to industrial waste treatment operations, such as landfarming facilities. These permits outline requirements for the handling and disposal of waste materials aimed at minimizing any risk to the environment and public safety.

Transportation of Waste Dangerous Goods

Saskatchewan's Dangerous Goods Transportation Act (DGTA) and Regulations (DGTR) promotes public safety in the transportation and handling of dangerous and waste dangerous goods. Staff from within the unit have been appointed as provincial inspectors, and therefore have assumed primary responsibilities for the transportation and handling of waste dangerous goods. This responsibility includes registration requirements for generators, carriers and receivers, and the maintenance of a tracking system to monitor and ensure proper handling, storage, transportation and disposal of the waste dangerous goods in a manner which is safe for the public and the environment.

(a) In-Province Transportation

There has been a substantial effort made by the unit to increase business and industry awareness of their responsibilities under the Dangerous Goods Transportation regulations with respect to wastes. This has had a two-fold effect. Firstly, there has been a 500% increase in registered companies complying with the regulations over the previous year. Secondly, the registration process has ensured a safe and environmentally acceptable method of waste transfer/disposal for the firms complying with the regulations.

(b) Out-of-Province Transportation

Increased awareness among business and industry, regarding proper waste disposal, has led to a 420% increase in the amount of properly documented waste transported for out-of-province recycling and disposal. This increase in documented waste transfers is also a result of the Unit registering/verifying waste disposal companies that have the necessary procedures in place to handle the waste streams. The current emphasis is to try to ensure all waste movements comply with DGTR regulations and thereby, promote proper disposal of waste materials. This proactive education approach to ensure proper procedures are followed and understood has been supplemented by the addition of prosecution procedures to the normal operations of the Unit.

Reclamation of Industrial Sites

As part of Saskatchewan's commitment to the plans of the Canadian Council of Ministers of the Environment to establish a National Contaminated Sites Remediation Program, the Department undertook a study to develop an inventory of active and "orphaned" contaminated sites in Saskatchewan. Municipalities, industries and institutions were surveyed through a mail out questionnaire to identify any known or suspected contamination events. The results of the study are currently under review.

Site reclamations at two contaminated industrial sites were completed and entered the post-remediation monitoring stage of the process. Another five sites currently have reclamation work in progress. The remedial work includes either the isolation of the pollutant so as to control its impact or the complete destruction of the contaminant.

PCB Management

The Department continues to manage Saskatchewan's PCB waste in accordance with The PCB Waste Storage Regulations which were made pursuant to *The Environmental Management and Protection Act* and which came into force on April 11, 1989. The regulations are intended to ensure that PCB wastes, at all non-federally regulated PCB storage sites, are managed in an environmentally secure manner.

The regulations require that the operators of PCB storage sites submit a revised inventory every January and July 1. There was a 100 percent compliance rate for the January 1, 1991 reporting date. The Department works cooperatively with Environment Canada using these inventories to update the federal department's National PCB Inventory, which is maintained for reference on the provincial computer system.

The number of sites affected by these regulations continues to fluctuate. Additions to the number come from the creation of new sites and the reopening of old sites when PCB equipment is taken out of service and put into storage. Reductions result from site closures as equipment is decontaminated or consolidated at the Province's Boundary Dam storage facility.

The trend in the number of **active** sites points downward. Of the 130 sites that have been regulated, only 65 remain active as of March 31, 1991. This is down from the 98 sites active as of January 1, 1990. The number of active sites is expected to continue decreasing over the short term as companies ensure that their waste is either decontaminated or consolidated at the provincial facility to comply with the regulations' two-year limit.

The Industrial and Hazardous Waste Unit inspected 78 of the provincial PCB sites during the 1990/91 year. Although the majority of the sites were found to be in compliance with the regulations, operators were formally made aware of any deficiencies noted during the inspections.

The provincial PCB storage facility operated by SaskPower at Boundary Dam now includes 14 buildings and will continue to expand to meet demand in response to the Province's program to consolidate non-treatable PCB waste at one secure site. To March 31, 1991, 3426 containers/items had been delivered to the site. It is estimated that the provincial facility now houses approximately one third of the high level liquid waste in storage in Saskatchewan. In addition, approximately 1.1 million litres of mineral oil contaminated with low levels of PCBs were decontaminated by waste management companies operating in Saskatchewan under the approval of the department.

Table 9
Waste Dangerous Goods Transportation Registrations

	1990/91	1989/90	1988/89	1987/88	1986/87	Total
Waste generators	1567	239	48	39	41	1934
Waste carriers	30	15	27	27	16	115
Waste receivers	25	20	16	6	11	78

Table 10
Volumes of Waste Dangerous Goods Transported Inter-Provincially and Transborderly (Metric tonnes)

1990/1991	1989/1990	1988/1989
2112	406	341

Municipal Waste Reduction Unit

Municipal Solid Waste Reduction

Public interest in reducing the amount of municipal solid waste (MSW) requiring disposal continued to increase during the year. This resulted in many requests to the branch for information and assistance in waste reduction activities. In order to effectively respond to these requests the branch invested substantial time and effort into remaining abreast of current MSW reduction information.

As part of these public information activities the branch produced, or participated in the production, of two publications. The first of these was a summary of MSW recycling in the province. The second, produced in conjunction with the Public Affairs Branch, was a new Reuse and Recycling Directory for the province. This directory was released to the public just after the end of the year.

Beverage Container Program

The year saw continued expansion of both the SARCAN Recycling depot system and the province's beverage container collection program.

At the beginning of the year the SARCAN depot system included 55 depots employing about 135 disabled individuals. By year's end the number of depots had increased to 61 and the number of disabled employees to 150.

Changes in the beverage container collection program were reflected in the types of containers being collected and the range of beverages affected. The table below summarizes the changes which occurred during the year.

Table 11
Changes in the Beverage Container Collection Program

Beverage Container Collection Program	As The Year Began	As the Year Ended
Beverages affected	Carbonated soft drinks Beer	Carbonated soft drinks Beer
Container types collected	Aluminum cans Plastic bottles (one litre and larger in size only)	Aluminum cans Non-refillable glass bottles Plastic bottles (all sizes)

The yardstick of success for the beverage container program is the container return rate. Table 12 compares the return rates for this year and the previous year.

The aluminum can return rate continued to exceed our expectations. Return rates for glass and plastic bottles were good considering that only six months had elapsed since major changes in the collection of these containers. The return rates for these bottles will increase as the public becomes more used to saving them for return.

Table 12
Beverage Container Return Rate

	Return Rate	
Container Type	1989-90	1990-91
Aluminum can	70%	77%
Non-refillable glass bottle	n.a.	31%
Plastic bottle	55%	56%

Municipal Waste Unit

Municipal Waste Landfills and Liquid Waste Haulers

The Municipal Refuse Management Regulations, which were enacted in 1986, pertain to the establishment and operation of municipal refuse disposal grounds in the province. A regulatory process was developed to ensure the environmentally sound citing, development, operation and monitoring of such facilities. The recent Landfill Meetings to which all municipalities were invited, held in the months of February and March of 1991, enabled the province to hear the public's views on landfills. One of the major outcomes of these meetings was the confirmation that a Provincial Solid Waste Management Strategy should be developed. The department, with the assistance of municipal officials, is currently developing a strategy. The activities of the department in this respect are summarized in the following table.

Table 13
Municipal Landfill Activities

Applications received	32
Authorization to Establish Facilities Issued	10
Permits to Operate Issued	54
Landfill Site Closures	3
Complaints Received	951
Inspections	905
Bylaws	22
Landfill Meetings	18
Council Meetings (Establishments/Closures/etc)	193
Pesticide Container Disposal Site Inspections	75

The Municipal Refuse Management Regulations also require that all persons or companies involved in the business of transporting and disposing of liquid domestic wastes obtain a permit from the department. A total of 241 permits have been issued.

Chemical Management Section

The Chemical Management Section expanded its scope of responsibilities during the 1990-91 fiscal year. The growth of the Section's responsibilities is attributable to the performance of its members in the implementation of programs associated with the Hazardous Substances Regulations as well as operations of the Agricultural Chemical Collection Program (ACCP).

Staff members continued to serve on organizations such as the Canadian Council of Ministers of the Environment (CCME), National Task Force on Leaking Storage Tanks, the Canadian Association of Pesticide Control Officials (CAPCO), the Biomedical Waste Disposal Steering Committee, the Saskatchewan Advisory Committee on Insect Control and the Pesticide Container Management Advisory Board.

Chemical Safety Unit

The overall mandate of the Chemical Safety Unit is to promote, enhance and enforce the sound management and handling of chemical substances as a means to ensure the continued protection of people, property and the environment. The Unit's activities during the 1990-91 fiscal year included the following:

Hazardous Substances Regulations

The Hazardous Substances Regulations, which were promulgated in 1988, came into effect on April 1, 1989. The regulations provide greater control over the storage of a wide variety of hazardous chemicals within the province.

The Chemical Safety Unit assumed the responsibility for the adminstration and enforcement of these regulations for the agricultural industry, warehousing industry, manufacturing industry, mining industry, chemical industry and a variety of other miscellaneous sectors which store potentially hazardous chemicals. The Unit administers and enforces the regulations for approximately 1130 of the chemical storage facilities which had registered with the Department by the end of the fiscal year. Statistics for registered storage facilities governed by the regulations are presented in Table 14.

Table 14

Hazardous Substances Regulations - Registered Storage Facilities by Industrial Sector

Agricultural Industry	861
Bulk Plants	381
Cardlocks	43
Chemical Industry	19
Distributing	4
Manufacturing Industry	27
Mining Industry	28
Service Stations	1325
Transportation	43
Warehousing	6
Miscellaneous	378
Total	**3115**

Administrative activities during the year included continued facility registration coupled with initial compliance inspections at approximately 50% of the storage sites. The Unit's activities during the next year will continue to focus on storage site compliance audits to assist owners to meet the 1994 compliance deadline. Liaison with industry organizations showed progress in the development of good working relationships and acceptance of regulatory guidelines.

Unit members also assisted with the initial preparation of amendments to the Hazardous Substances Regulations during the fiscal year.

Agricultural Chemical Collection Program

The Agricultural Chemical Collection Program was developed to provide a solution to the problem of long term storage of antiquated, deteriorated or damaged pesticides at farms and rural municipal facilities across the province. Continued storage of these chemicals without a practical means for environmentally sound disposal could pose a potential health, safety and environmental hazard. Collection events are staffed by fully trained department personnel.

The Agricultural Chemical Collection Program was well received during the first year of operational as shown by the quantity of chemicals collected. During the 1990 spring through fall period, collection events were conducted at 48 separate locations serving 98 rural municipalities across the province. A total of approximately 32 tons of unusable farm chemicals were collected. Agricultural Chemicals collected were transferred to a central location for repackaging and ultimately were removed by special waste management firms for final disposal at a licensed industrial waste incinerator or in a secure chemical landfill.

Chemical products collected came in a wide variety of packages, ranging from small aerosol cans to 45 gallon barrels. The nature of the chemicals was also quite diverse with both first generation environmentally persistent halogenated-hydrocarbons and inorganic compounds being collected as well as contemporary pesticides which have been damaged due to improper storage.

Collection events for the second year of the ACCP will commence on April 8, 1991 and continue until October 23, 1991. A total of 98 rural municipalities will be served by the program during the next fiscal year. The remaining rural municipalities will receive the services of the program during the spring through fall period of 1992.

Pesticide Container Disposal Program

There are over one million pesticide containers sold in the province annually. In response to numerous requests from concerned groups, the Pesticide Container Disposal Program was initiated in 1983.

The number of Pesticide Container Disposal Sites has increased from 170 in 1983 to a number stabilizing at approximately 280 sites. Containers and residue for the 1990/91 and 1991/92 spraying season will be collected by the contractor during the summer of 1991, therefore statistics are not available.

The Saskatchewan Pesticide Container Management Association Incorporated was formally established on March 21, 1991 under *The Non-Profit Corporations Act*. Membership of the Association includes representatives from Saskatchewan Environment and Public Safety, Saskatchewan Rural Development, Saskatchewan Agriculture and Food, the farming sector, the pesticide manufacturing and distributor's sector, SARM, the Western Fertilizer and Chemical Dealers Association, and the Rural Municipal Administrators Association of Saskatchewan.

The purposes of the Saskatchewan Pesticide Container Management Association Inc. are to provide advice and make recommendations to the Minister of the Environment and Public Safety on issues related to the management of pesticide containers and associated residues; to co-ordinate the funding and management of the Pesticide Container Disposal Program or related activities; to conduct the day-to-day operations and the financial management of the program; and to increase the understanding and awareness of environmental issues by sponsoring research, education and public participation in rural environmental issues.

In addition to Association membership, Saskatchewan Environment and Public Safety provides technical assistance in the establishment of new Pesticide Container Disposal Sites and investigates complaints regarding existing sites and improper container disposal practices.

Chemical Information Service

The Unit assumed responsibility for information services to the public, industry and other government agencies under the Chemical Information Service. During 1990-91 the Unit handled approximately 625 inquiries regarding the toxicity, handling and storage of a wide variety of chemical substances. The Unit remains committed to providing the most accurate and recent information by updating the reference library on an ongoing basis.

Small Quantity Chemical Collection

During 1990-91 members of the Chemical Management Section and Chemical Safety Unit once again provided technical support for the Regina Household Hazardous Waste collection event. Approximately 48 barrels of hazardous household wastes were collected from 745 participants during two consecutive Saturdays in early June. This, the third such event for the city, was considered a success and forms an important part in reducing the amount of hazardous materials which enter the city's landfill.

During October of 1990 the Department assisted the City of Moose Jaw with a similar event. Approximately 175 residents of the city participated in the event which generated approximately 22 barrels of household hazardous waste. Next year staff members will continue to promote and provide technical support for these types of events.

Fuels and Industrial Chemicals Unit

The Fuels & Industrial Chemicals Unit completed its first full report period with the 1990-1991 report period. The main objective of the unit is to ensure the safe and environmentally acceptable storage of fuels and other industrial chemicals through the effective administration and enforcement of the Hazardous Substances Regulations.

Concerned primarily with fuel storage facilities, the section deals with service stations, bulk plants, cardlocks and keylocks as well as the large distribution terminals and transportation facilities that typically store large quantities of fuels. The unit is responsible for the approximately 1800 storage facilities involved in the handling, storage and re-sale of fuel products.

Registration

The main direction of the unit's activities was completion of the registration process. Independently owned service stations do not belong to a trade group and are difficult to communicate with.

A new initiative intended to increase compliance with the registration process and to remedy this is in the form of an amendment that has been proposed to the Hazardous Substances Regulations that will make it a violation to deliver fuel to or order fuel to be delivered to a storage tank that has not registered with the department. This will place the onus not only on the owner of the tank but on the company that is delivering to the tank.

To facilitate this change, a process of clearly identifying those tanks that are registered with the department has begun.

Metal tags that have the facility's unique registration number and tank number are being permanently attached to the fill pipe of all registered storage tanks.

Environmental Youth Corps employees are inspecting and tagging tanks around the province, having completed inspections of facilities in over 400 communities in the province during the report period.

Approvals and Classification

The classification of all **registered** underground tank storage sites in the province has been completed. This classification, a major undertaking, consists of an assessment of a site for its sensitivity for potential impact on the environment and on human health and safety and includes a review of a number of factors such as:

- the quantity and quality of groundwater resources that could be affected at a site;
- the density and proximity of wells;
- the local geology;
- the proximity of bodies of water, densely populated areas, surface and subsurface structures, and
- the presence of geological, hydrogeological or environmental conditions that necessitates the taking of unusual precautions to prevent pollution of the environment.

Program staff continue to review proposals and requests for approval and applications for new construction and for upgrading of existing storage facilities around the province.

During the report period there were several hundred abandoned and unregistered facilities identified, including 400 unregistered storage facilities and 80 site classifications and approvals given for new or upgraded facilities.

Stakeholder Information Meetings

During the report period considerable efforts were made to inform client groups that we deal with of the regulations and the standards and guidelines that have been developed. Meetings were held with the oil companies and the installers and service companies that operate in the field to ensure that they are aware of the regulatory requirements.

The Environment Youth Corps program has provided summer jobs for students to work in the environmental field. Four students made inspections in a total of 400 communities over the term of the summer. Six hundred registered facilities were inspected with an additional 300 unregistered facilities and 150 out-of-service operations found. This program is expected to continue again next year.

Guideline Development

Guidelines and operating procedures were developed for a number of areas during the course of the year to clarify the regulatory requirements and to provide direction in those areas where there is some uncertainty in the intent of the regulations. A guideline for compliance has been completed that summarizes this information in one location.

Installer Awareness Program

The CCME Environmental Code of Practice for Underground Storage Tanks Systems Containing Petroleum Products provides for a certification program for installers of petroleum storage equipment. It has been recognized for some time that proper installation is one of the key elements in a successful storage tank management program. Late in the fiscal year program personnel successfully completed an installers certification training course and are beginning developmental work on certification requirements for the industry in Saskatchewan, working in conjunction with the other prairie provinces.

Water Quality Branch

Objective

- To protect and enhance Saskatchewan water quality.

Activities

- Establish water quality objectives and guidelines for surface water and groundwater.
- Establish guidelines and standards for water and wastewater works, license construction and operation, and enforce standards.
- Investigate and evaluate water quality concerns, trends and issues.
- Monitor and inspect water and wastewater works to determine compliance with standards and guidelines.
- Manage and report provincial water quality data.
- Communicate with agencies and the public by providing information and advice on water quality matters.
- Identify and consult on water quality research needs.
- Regulate chemical and biocide use in an near surface waters.
- Co-ordinate a certification and training program and provide technical assistance to the owners and operators of water and wastewater works.
- Work with other governments to monitor and protect transboundary water quality.

Municipal Assessment and Certification Section

The Municipal Assessment and Certification (MAC) Section is responsible for compliance monitoring in support of the Water Quality Branch's municipal licensing program for water and sewage works. The section also provides technical advice, as well as training and certification programs for the operators of water and sewer systems. Eight regional offices were in operation during 1990-91, located in Estevan, Swift Current, Kindersley, Regina, Melville, Tisdale, Watrous and North Battleford.

Compliance activities during 1990-91 included 946 works inspections, 31 investigations, attendance at 74 municipal emergencies by staff in the Section's 8 environment regions. Several drinking water contamination events resulting from gasoline from leaking underground storage tanks were also responded to by the MAC Section.

Aerial infrared photography for remote detection of seepage from wastewater treatment lagoons was completed in the North Battleford environment region.

Technical advice regarding the operation of works was provided during an additional 113 inspections throughout southern Saskatchewan in 1990-91.

The Section presented 12 operator training workshops, which were attended by 314 operators. The workshops included one new one which was developed and presented to improve the quality of our training instructors.

There were 241 operators for water and sewage works certified in 1990-91 under the voluntary Operator Certification Program.

Standards and Approvals Section

Regulation of Municipal Water and Wastewater Works

The Department regulates all works with a capacity of 18 or more cubic metres per day. During 1990-91, the Branch issued 67 Minister's Orders for waterworks and 58 permits for sewage works. The section also completed 116 approval notices for construction of works. At the end of the fiscal year, there were 589 licensed waterworks and 481 licensed sewage works in Saskatchewan.

The Branch worked with several large communities during the year to achieve upgrading of sewage treatment facilities. A new Permit with revised monitoring conditions was issued to the City of Moose Jaw for their effluent irrigation project. Completion of this project has eliminated the need for treated effluent release to the Moose Jaw River system.

Staff attended and participated in their first Water Appeal Board hearing regarding the Zenon Park lagoon expansion.

Regulation of Industrial Effluent Works

Industrial operations (excluding mining) require a permit from the Branch which authorizes them to construct, alter, extend or operate effluent works.

Construction Permits were issued for a closed loop and water system at Sask Power's Boundary Dam Power Station and improvements to the effluent treatment system at the Prince Albert Pulp and Paper Mill Requirements were set for CSP Foods Limited at Nipawin to carry out a study on upgrading their industrial effluent treatment works.

The Industrial Unit worked on construction requirements for effluent works for the following new industries: Millar Western Pulp Mill at Meadow Lake, Husky Upgrader at Lloydminster, Shand Power Station at Estevan, Poundmaker Ethanol Plant at Lanigan and Saferco Fertilizer Plant at Belle Plain.

Branch staff participated on a Federal-Provincial Technical Working Group to overhaul the Pulp and Paper Mill Effluent Regulations under The Fisheries Act and to develop new regulations under The Canadian Environmental Protection Act for control dioxins.

Water Quality Management Section

Surface Water Quality Monitoring

The Branch monitors water quality in major river basins on a regular basis to measure changes over time and to evaluate the effects of wastewater discharges and other pollution sources and the success of regulatory controls.

The Branch initiated a recreational lake water quality assessment program in 1990 at Round Lake on the Qu'Appelle River system. The project involved an evaluation of current and historical water quality in the lake. Local residents and cottagers actively participated in lake monitoring activities.

Biocide Regulation

The Branch issues Permits and provides technical advice for the use of chemicals in or near surface waters. 101 Permits were authorized in 1990-91, mainly for control of nuisance aquatic plants and algae, mosquitoes and blackflies. Staff continued to promote non-chemical control alternatives including mechanical weed harvesting and the use of biological agents for biting fly control. Beginning in 1991, the biological agent Bti will be used exclusively for the large-scale blackfly larvae control program on the Saskatchewan River system.

Regina Groundwater Project

The Branch continued co-ordination of a project to develop an aquifer protection plan.

A report on aquifer sensitivity and land use guidelines for aquifer protection was published and distributed. A workshop was convened to develop a long-term monitoring strategy for aquifer water quality. A report on the monitoring strategy was published for use by the Department, municipalities and industry.

Data Management

The Branch manages a mainframe and microcomputer base data system for all Saskatchewan surface water, groundwater, drinking water and wastewater quality data. Staff provided data retrievals and analysis in support of Branch and Department programs and for external clients.

During 1990-91 a major feasibility study to redesign the existing mainframe database system (ESQUADAT) was completed. The new system will be implemented over the next 1 to 2 years and will provide on-line access to the provincial water quality database to a wider range of users.

Mines Pollution Control Branch

Objectives

- To ensure short and long-term protection of the environment at mining and milling operations.
- To protect the public from naturally occurring radiation hazards.

Activities

- Licensing; to issue and administer "approvals to operate" or "ministerial approvals" to mining companies.
- Inspections and monitoring; to routinely inspect mining operations and collect samples to determine compliance with license conditions and provincial regulations.
- Data handling; to review and analyze all environmental data related to the mining industry.
- Regulation development; to develop and update provincial regulations related to the mining industry.
- Radiation surveys; to conduct surveys to monitor areas where the public exposure to naturally occurring radiation is a concern.
- Abandoned mines remedial action program; to identify abandoned mine workings of hazard to the public safety and to the environment, and to initiate remedial action to reduce or eliminate the hazards.

Uranium Mines Section

The Uranium Mines Section is responsible for licensing, monitoring and inspecting all uranium and gold mining operations in the province. Staff visit the sites to perform inspections and take samples in and around the operations. Compliance water sampling at the sites resulted in more than 5113 separate water quality analyses being performed from 27 water quality monitoring locations. Approvals to construct and operate the facilities are administered by the Branch. In addition, companies are required to monitor all aspects of the environment on a regular basis and submit the data to the Department. This monitoring data resulted in more than 40,000 separate water quality analyses being performed from approximately 280 different surface and ground water sample locations. Additional monitoring requirements include fish, sediments, macrophytes, air quality and other biological media. The public has access to all licenses issued and the monitoring data.

The Uranium Mines Section is also responsible for administering the abandoned mines remedial action program.

Claude Resources Inc. - Seabee Project

The Seabee Project Development is located approximately 120 kilometres northeast of La Ronge near Laonil Lake. Claude Resources Inc. received approval for project development from the Environmental Assessment Branch on January 24, 1991.

Ministerial Approval #MPCO-37 and Minister's Order For The Operation of Waterworks #MPCMO-25 were issued on March 25, 1991.

Activities during the 1990-91 fiscal year included

construction of camp facilities and a winter road for the transportation of all equipment and supplies necessary for mine development.

The Mines Pollution Control Branch (MPCB) conducted eight environmental inspections of the site and collected seven compliance water quality samples of the mine water discharge with 297 separate analysis being performed.

Claude Resources anticipates ore processing to commence in November, 1991.

Abandoned Mines Remedial Action Program

A remedial action program for the abandoned mines located in the province was developed and initiated in May, 1988. In February,1989 a full-time mines inspector was hired by the Branch to implement the abandoned mines remedial action program.

The program has identified and priorized remedial work on over 500 abandoned mines in Saskatchewan, eight of which have tailings areas.

During the summer of 1990, a comprehensive field program was completed. The status of all abandoned mines in the province was completed through contact with local councils, landowners, local residents and field investigations conducted on many of the sites. Remedial work eliminated hazardous situations at 14 sites utilizing eight different contractors.

With the co-operation of the Department of Parks and Renewable Resources, MPCB arranged for the decommissioning of the abandoned Lorado Uranium mill located near Uranium City. Financing for the work was provided by Conwest Exploration Co. Ltd. of Toronto.

In the fall of 1990, an annual report was issued by the MPCB outlining all details and pertaining to the program. The report also included an inventory of all of the abandoned mines and remedial work completed. The report will be updated when each summer inspection period is completed.

Amok, Cluff Lake

Amok commenced mining and milling operations at the Cluff Lake site in 1980. The mining operations over the past 11 years have seen the completion of mining of the "D" and Claude open pit orebodies as-well-as the completion of mining of the O - P underground orebody.

In 1990 Amok was actively mining the Dominique Janine open pit and the Dominique Peter underground deposits.

The Company operated in adherence to Permit to Operate Industrial Effluent or Sewage Works #MPCO-29 and Ministers' Order for the Operation of Waterworks MPCMO-17. These permits were issued on the 30th of April 1990.

Mines Pollution Control Branch Inspectors performed 11 compliance inspections during 1990. The 8 compliance monitoring samples collected at the final point of discharge returned 355 analysis for metals, radionuclides, major ions and nutrients. None of the analytes exceeded the limits for authorized concentration of contaminants in an industrial effluent. Water and sediment samples were collected at numerous other locations for background data and information to support MPCB initiatives.

Amok monitored the final point of discharge on a weekly basis during 1990. None of the samples collected exceeded the limits for industrial effluent discharge listed in schedule I of MPCO-29.

Corona Corporation - Jolu Project

Corona Corporation was issued Ministerial Approval MPCO-27 and MPCMO-15 on February 15, 1990. MPCO-27 was amended on August 2, 1990 to allow the Company to utilize wetlands for the polishing of treated effluent. This approval had previously been granted in 1989 for the same purpose.

The Corona site was inspected 11 times during the 1990 license year. Compliance monitoring was carried out to ensure that the treated mill effluent met effluent quality standards.

At no time during the term of the license did the companies' monitoring indicate that effluent standards were being exceeded.

Denison

Denison Mines Ltd. completed their underground test mine program in October of 1989. The permit which they operated under during the test mine development expired on December 31, 1989 and was replaced by Minister's Order for Maintenance and Monitoring, MPCMO-21, on January 1, 1990. The maintenance and monitoring permit was issued to the company to ensure that the test mine was being monitored during the interim period between completion of the test mine and possible start-up of a full scale mine.

The site was inspected three times during 1990 to ensure that all facilities were secure.

Cameco - Key Lake Operation

The Key Lake Operation mining and milling facility completed its seventh year of operation on October 20, 1990.

Permit To Operate Industrial Effluent or Sewage Works #MPCO-30 and Minister's Order For The Operation of Waterworks MPCMO-18 were issued on September 14, 1990. The company continues to operate and adhere to the requirements of these permits.

The company completed mining of the Gaertner orebody in 1987. Mining of the Deilmann orebody commenced in 1988 and is expected to run until approximately 1999. Mining includes the removal of overburden, ore removal and the continued operation of the groundwater dewatering system.

The company is presently in the process of conducting a fairly significant tailings research program to address tailings segregation and ice accumulation in the deposited tailings.

The company continued to operate a batch liquid effluent discharge system in order to monitor the quality of the effluent prior to discharge to the environment.

The branch conducted 12 site inspections during the fiscal year. A total of 22 compliance water quality samples were taken at two different stations and 987 analyses were completed in 1990.

Cameco - Beaverlodge Decommissioning

Cameco's Beaverlodge operation near Uranium City has completed its fifth full year of transition phase environmental monitoring since the completion of the decommissioning work at the site. No remedial work was required on the reclaimed area for 1990.

Branch staff inspected the site six times during the fiscal year collecting 21 compliance water quality samples from 8 monitoring stations. A total of 756 water quality analyses were performed.

Cameco - Jasper Operation

Cameco's Jasper Operation, which was combined from the Star and Fork operations was issued Ministerial Approval MPCO-28 and Minister's Order For The Operation Of Waterworks MPCMO-16 on February 22, 1990.

The Star Lake Mill was placed in a temporary shut-down mode following the mining of the Star Lake reserves in June 1989. Rehabilitation of the Star Lake mill and tailings area was initiated in early 1990. Milling of the Jasper ore commenced in April.

The Star Lake site operated their tailings effluent treatment system from May to the end of October, 1990. The sprinkler discharge system was utilized in the T2 and T3 muskeg areas for effluent treatment/polishing. All license limits were met for the final discharge to David Creek in 1990.

The branch carried out 12 site inspections during the fiscal year. A total of 10 compliance water quality samples were collected from 2 sites and 368 analyses were completed.

Vista Mines

During 1990 the company was issued Minister's Order No. MPCMO-20 for maintenance and monitoring of the Bootleg Lake Mine/Mill operation located near Creighton, Saskatchewan. The operation has been inactive since June, 1989.

During the fiscal year, the branch carried out 6 site inspections. A total of 12 water samples were collected from three sites and 552 analyses were completed.

During the 1990-91 fiscal year, MPCB conducted 11 environmental inspections of the Rabbit Lake Operation. Twenty-six water samples were taken at eight different monitoring stations and 887 individual analyses were performed.

Cameco - Rabbit Lake Operation

Permit to Operate Industrial Effluent or Sewage Works #MPCO-31 and Minister's Order For The Operation of Waterworks #MPCMO-19 were issued on June 12, 1990. In the 1990-91 fiscal year, mining, ore removal and stockpiling continued at the Collins Bay B-zone open pit mine. Mining of the B-zone pit was completed in February, 1991.

As part of the decommissioning process of the B-zone facility, Cameco applied to the appropriate regulatory agencies to deposit mineralized waste rock in the mined-out B-zone pit. The application continues to be evaluated.

Monitoring of the November 1989 accidental escape of 1925 m^3 of contaminated mine water to the environment revealed that no detrimental effects to the environment occurred.

Construction of the Eagle Point facility continued. The area is being proposed for the test-mining phase scheduled to commence during the summer of 1991. At the end of the fiscal year, the site contained the decline portal, ore and waste rock storage area, sedimentation pond and pumphouse, electrical substation, fresh water intake jetty, and necessary roadways.

The Collins Bay A&D zones remained inactive.

On January 3, Cameco submitted a proposal as part of the Rabbit Lake tailings pond decommissioning. The work will be carried out during the summer of 1991 and will include the collection and evaluation of geological chemical and hydrogeological data. Monitoring of the effluent at the final point of control confirmed that all license conditions with respect to the effluent limits were met.

Cigar Lake Mining Corporation

Development of a test mine for the Cigar Lake orebody continued throughout the year.

The Company obtained construction permits MPCC-28 and 31 for construction of a slimes containment pond; acid generating waste rock containment facility; sulphuric acid holding tank and secondary containment system; decontamination building; spill protection system for the runoff collection reservoir slimes pond and waste rock runoff settling pond; and ore storage and contaminated vehicle wash bay. Work was completed satisfactorily, except for the ore storage facility, which was delayed until spring, 1991.

A new operating permit MPCO-33 was issued on January 21, 1991 accompanied by Minister's Order MPCMO-22 for the operation of Potable Water Works.

The shaft was completed to 500 meters by the end of May, 1990. Development was continued at the 420 meter level (above the ore body) and was began at the 480 meter level (below the ore body) in April.

Water flows were controlled to less than 7 l/second on average over the year, by intensive grouting. The treatment plant was ran every 2 or 3 days at about 40 l/second to treat accumulated water.

There were no effluent excursions, and no spills during the year. CLMC reviewed their spill contingency plans to ensure adequate spill protection was in place, and chose to upgrade the minewater pipeline facility by installing it inside a 1/2 moon galvanized culvert draining to the contingency pond.

The Branch conducted 12 inspections during the year. 13 compliance or ambient water samples were taken and 715 analyses were completed.

Technical Services Section

In early 1986, a Technical Services Section was established to ensure that all specialized technical needs of the branch are provided. Because of the complex nature of mining operations and environmental protection at mines, necessary expertise is provided in a wide range of disciplines including radiation, industrial chemistry, water quality and aquatic biology, hydrology, engineering and contaminant pathways analyses.

The Section manages the branch involvement with environmental assessment of mining projects and provides detailed assessments of technical documents submitted by mining companies and consultants. The Section also formulates responses to policy papers from other agencies and branches. Special studies are conducted to address specific needs in the branch program to control pollution from mining operations in the province.

Special studies to note for this fiscal year include an "Assessment of Wetlands for Gold Mill Effluent Treatment"; "Technical Review of Key Lake Waste Management System", and "Seepage Containment Migration Assessment of Key Lake Mill Tailings Disposal Facility".

Considerable time and effort was spent as well on the Mining Advisory Committee of the Round Table and the Environment and Economy; developing the "mining" portion of the State of the Environment Report, finalizing and carrying out consultation with stakeholders for draft Mineral Industry Environmental Protection Regulations; and development of a Waste Rock Management Strategy for the mining industry, which is now an ongoing initiative.

Potash/Coal Section

The Mineral Industry Pollution Regulations require that all mines having discharges of industrial wastes apply for ministerial approval to operate. This Section regulates these discharges for the ten potash mines and five coal mines in the province. Through the submission of monitoring reports and by site inspections, environmental control is maintained.

Other mining operations in the province regulated in a similar way by this Section included a base metal mine, a salt mine, a peat producer and 6 potassium sulphate developments.

A total of twenty-three Ministerial Approvals were issued by this Section to mining operations during the year.

Potash Mining

Saskatchewan's potash mines are authorized by approvals under the regulations to store waste salt and brine generated by mining and refining operations in approved areas. Excess volumes of brine may be injected into briny aquifers but no other releases are allowed.

All mines are monitoring the effectiveness of the containment systems.

During the year, particular emphasis was placed on the search for and development of procedures and methodology for removing the growing quantities of salt tailings from the surface at existing minesites. The potash industry initiated several studies, many long term, to evaluate such options as disposal into mined out workings, deep well injection, impermeable capping of tails, and others. The department has established a co-operative approach with the potash industry in an effort to resolve this environmental priority.

Brine Inflows at Potash Mines

Inflow of water to IMC's K-2 mine remains a serious problem, although flows are relatively stable at about 220 l/second.

Development of plans for a satellite mine to replace the existing mines is continuing.

Industrial Minerals

No particular environmental problems occurred during the year at the sodium sulphate, sodium chloride or peat mines.

Coal Mining

All five coal mines were licensed under the regulations. The quality and quantity of discharge waters were monitored and no particular problems were encountered. Emphasis presently is on finalizing reclamation guidelines, and procedures for releasing mining companies from further obligations for mined land which has been properly reclaimed. This will tie in closely with finalization of new Mineral Industry Environmental Protection Regulations, presently in final draft form.

Public Safety Division

Mission

To provide safety standards to industry and the general public in the fields of boiler and pressure vessel installations; elevator and amusement ride installations, building and accessibility standards, fire safety and licensing of persons engaged in work of gas and electrical installation.

Activities

Activities of the Public Safety Division are concentrated in three branches and one section reporting to the Executive Director.

- Mechanical Services Branch
- Fire Commissioner's Branch
- Building Standards Branch
- Licensing and Support Services Section

Effective January 1, 1991 the Fire Commissioner's Branch and the Building Standards Branch were transferred to the Department of Community Services. The reports of the activities of these branches reflect those undertaken to the effective date of transfer.

Mechanical Services Branch

Objectives

- To administer the provisions of *The Boiler and Pressure Vessel Act, The Passenger and Freight Elevator Act* and *The Amusement Ride Safety Act.*

- To establish and enforce minimum safety standards with respect to the design, construction, installation, operation and maintenance of high and low pressure boilers, pressure vessels of all types, pressure plant and other hazardous equipment, elevating devices and amusement rides.

- To ensure a high degree of plant operator and welder skills by means of examinations and the establishment of minimum qualifications.

Activities

- Inspect pressure vessels and boilers used in the province.

- Inspect and licence elevating devices and amusement rides installed/operated within the province.

- Verify the adequacy of new designs of boilers, pressure vessels and related equipment, elevating devices prior to installation, and confirm their concordance with the adopted codes and standards.

- Examine and licence power engineers, refrigeration engineers, refrigeration plant operators, firemen and pressure welders who will be operating or repairing equipment in the province.

Legislation and Regulations

The Mechanical Services Branch administers the following Acts and Regulations pertaining thereto:

- *The Boiler and Pressure Vessel Act*
- *The Passenger and Freight Elevator Act*
- *The Amusement Ride Safety Act*

In order to maintain the uniformity of safety standards throughout Canada, the following codes and standards have been adopted and are administered as part of the Regulations under the above Acts:

(a) CSA Code B51 - Boiler, Pressure Vessel and Pressure Piping Code
(b) CSA Code B52 - Mechanical Refrigeration Code
(c) ANSI B31 - Code for Pressure Piping
(d) ASME Code for boilers, pressure vessels, and pressure welding Sections I to XI inclusive
(e) Department of Transport specifications for construction and testing of liquified propane portable cylinders
(f) CSA Standard CAN 3-B44-M85 - Safety Code for Elevators
(g) CSA Standard Z267-M1983 - Safety Code for Amusement Rides
(h) CAN/CSA-Z185-M87 - Safety Code for Personnel Hoists
(i) CAN 3-Z98-M78 - Passenger Ropeways
(j) CAN/CSA-B355-M86 - Elevating Devices for the Handicapped.
(k) CSA Standard B311-M1979 - Safety Code for Manlifts

Inspections

Boilers and Pressure Vessels

The Boiler and Pressure Vessel Act provides for periodic inspections of all high pressure boilers in power plants, low pressure boilers in heating plants and all other pressure vessels and pressure plants used in connection with air, hot water, steam, oil, liquified propane, anhydrous ammonia, compressed gas or for refrigeration purposes. It also provides for shop inspections of all boiler and pressure vessel construction performed in manufacturing plants.

During the year under review, inspectors made a total of 10,006 inspections, including 345 new boilers, 1361 pressure vessels and 41 refrigeration plants which were installed in the province. Of these, 657 were manufactured in the province and were shop inspected by inspectors during construction.

During the year, five new sites were reviewed and licensed for the storage and distribution of anhydrous ammonia, which increased the total of anhydrous ammonia plants in the province to 161.

Sixty (60) safety valves were also reset and resealed, mostly on oilfield vessels.

A total of 1708 improvement orders or recommendations pertaining to improper or hazardous conditions were made by branch inspectors in accordance with *The Boiler and Pressure Vessel Act* and associated Regulations.

Under contract arrangements with Public Works Canada, 654 inspections were made under that department's Safety Code.

The number of inspections performed under *The Boiler and Pressure Vessel Act* during 1989-90 and 1990-91 are shown in Table 15.

Table 15
Number of Inspections Under *The Boiler and Pressure Vessel Act*

Type of Inspections	1990-91	1989-90
Boilers	4,634	5,769
Pressure Vessels	4,943	3,855
Refrigeration Plants	429	606
TOTAL	**10,006**	**10,230**

Elevators

The Passenger and Freight Elevator Act and Regulations made thereunder provides for periodic inspection of passenger and freight elevators in the province and for the annual licensing of elevating devices and elevator contractors.

During the year, 1406 routine elevator reinspections, 80 acceptance inspections and 122 special inspections were made. Special inspections are defined as a) those made to approve major changes in installations and b) those required to determine whether the equipment falls under the jurisdiction of the Act. Acceptance inspections are those performed on new installations before they are approved for operation.

A total of 495 correction orders were issued pertaining to improper or hazardous conditions in accordance with *The Passenger and Freight Elevator Act* and Regulations.

Amusement Rides

The Amusement Ride Safety Act and applicable Regulations provide for initial and subsequent inspections of amusement rides in the province. Two Hundred and Five (205) inspections were performed during 1990-91 compared to 234 for the year 1989-90.

Licensing

Elevators

Table 16 indicates the number of annual licences issued for elevating devices during the years 1989-1990 and 1990-91.

Table 16

Licences Issued Under *The Passenger and Freight Elevator Act*

Type of Licence	1989-1990	1990-1991
Passenger elevator	1,278	1,313
Freight elevator	197	191
Hand-power freight	14	13
Hydraulic freight	69	71
Electric dumbwaiter	149	153
Handicapped lift	174	197
Manlift	52	55
Escalator	23*	23*
Workman's hoist	--	--
Chairlift	1	1
T-Bar	12	12
Ropetow	29	30
Elevator Contractor's		
Class 'A'	9	--
Class 'B"	15	--
Class 'C'	2	--
TOTAL	**2,024**	**2,059**

*Licences issued covered 53 escalators

Amusement Rides

A total of 196 annual licences were issued for the year 1990-1991.

Approval and Registration of Design

As provided under *The Boiler and Pressure Vessel Act*, *The Passenger and Freight Elevator Act*, and *The Amusement Ride Safety Act*, design drawings and specifications for every new design and major alteration of boiler, pressure vessel, fittings, elevating devices and amusement rides to be used in the province must be submitted to the office of the Chief Inspector for approval and registration prior to commencement of construction.

Boilers and Pressure Vessels

During 1990-91, 1695 new designs were checked for compliance with the applicable codes and regulations in force, this number including 273 weld procedures. Of these 1,395 were registered and 300 rejected.

Elevators

Eighty Two (82) designs/specifications for new installations and major alterations were approved and registered during 1990-91, as shown in Table 17.

Amusement Rides

One (1) design/specification was approved during 1990-91 compared to six for the year 1989-90.

Table 17
Approvals and Registrations Issued under *The Passenger and Freight Elevator Act*

Type of Installation	1990-91	1989-90
Passenger Elevator	41	53
Freight Elevator	3	9
Dumbwaiter	6	1
Handicapped lift	29	26
Manlift	--	--
Escalator	--	4
Workman's hoist	--	--
T-Bar	--	--
Rope tow	1	2
Total	**80**	**95**

Engineer's And Fireman's Qualification, 1990

Every engineer or fireman responsible for the operation of a high pressure boiler, a low pressure boiler of 300 or more kilowatts, a steam plant, or refrigeration plant, must hold an appropriate class of certificate, as specified in *The Boiler and Pressure Vessel Act*. Such certificates are issued to persons who have the necessary qualifications and pass an examination.

All permanent certificates are valid for as long as they continue to be registered for a further five year period with the branch. Temporary certificates are valid for five years from the date of issue and may be renewed without examination, if application for renewal is made in accordance with the regulations.

Under Section 29 of *The Boiler and Pressure Vessel Act*, the chief inspector may, in exceptional circumstances, issue a permit for a limited period of time authorizing the operation of a steam plant by a person holding a certificate one class lower than the appropriate class.

Table 18 shows certificates issued in each classification and the number of examination papers written in 1990-91.

Table 18
Engineers' and Fireman's Qualifications, 1990-91

Type of Certificate	Examination Papers Written	Certificates Issued	Annual Registrations
First Class	93	5	14
Second Class	134	15	40
Third Class	257	37	92
Fourth Class	216	92	218
Fifth Class	76	68	111
Heating Plant Engineer's	--	--	--
Refrigeration Engineer's	79	58*	119
Permanent Certificates	**855**	**275**	**594**
Provisional	--	--	--
Special Provisional	34	13	
Fireman's	639	776	
Refrigeration Operator's	98	102	
Temporary Certificates	**771**	**891**	
Thirty-Day Permits	--	10	
Ninety-Day Permits	--	91	

Note: The above totals include the following certificates issued on an exchange with other provinces and duplicate certificates issued:

- One - First Class Certificate
- Four - Third Class Certificates
- Four - Fourth Class Certificates
*** Indicates duplicate certificate issued**

Pressure Welding Qualifications

Welding Regulations under *The Boiler and Pressure Vessel Act*, provide that any pressure welding on a boiler, pressure vessel, pressure piping, or pressure plant may be done only by persons authorized by the Boiler and Pressure Vessel Safety Branch.

Welding authorizations are issued to persons who have passed a welder's qualification test, supervised by an inspector appointed under *The Boiler and Pressure Vessel Act*. They are renewable twenty-four months from the test date, subject to re-testing.

The number of welding qualification tests conducted during the 1989-90 and 1990-91 fiscal years are shown below in Table 19.

Table 19
Welding Qualifications Tests

Type of Test	1990-91	1989-90
Qualification tests (each for four positions)	876	809
Pipeline and other special tests	246	373
Total Tests	**1,122**	**1,182**

Accidents

During the past year, seven accidents involving elevating devices were reported and investigated with the following results:

Two (2) incidents in which people tripped upon entering/exiting elevator. The cause was determined as being an electrical component failure in the levelling circuits upon approach to landing. Two (2) people required medical attention.

Two (2) incidents which resulted in elevator equipment damage due to inappropriate usage.

One (1) incident in which unqualified personnel attempted to repair an elevator resulting in an injury due to inexperience and carelessness, one person required medical attention.

One (1) incident in which a person was hit by a closing door resulting in a minor injury.

One (1) incident in which a handicapped lift suspension means failed resulting in one person requiring medical attention. The lift was not registered and it has been removed from service.

Fire Commissioner's Branch *

* The Fire Commissioner's Branch moved to Saskatchewan Community Services effective January 1, 1991.

Objectives

- To administer *The Fire Prevention Act, 1980;*
- To provide a high measure of public safety; and
- To minimize loss of life and property damage as a result of fire.

Activities

- foster fire prevention;
- collect and disseminate information regarding fires in the province;
- investigate or hold inquiries into a fire, where considered necessary or to ascertain cause, origin and circumstances;
- inspect buildings or premises and order remedy or removal of conditions likely to cause fires;
- provide training in firefighting and fire prevention;
- authorize and/or undertake surveys and make recommendations respecting fire equipment and fire protection and provide assistance to other government departments, municipalities, industry, organizations, business committees and individuals with respect to fire safety measures;
- examine plans and specifications for public and other buildings as required by regulations.

The Annual Report of the Fire Commissioner is published separately, based on the calendar year. It contains more detailed information on the activities of the Fire Commissioner's Branch, the causes of fires and the extent of fire loss in Saskatchewan.

Legislation and Regulations

The Fire Commissioner's Branch enforces *The Fire Prevention Act, 1980* with general provisions applying to all property and the regulations enacted thereunder.

The branch also inspects and carries out activities with regard to regulations adopted under *The Housing and Special-care Homes Act*, *The Residential Services Act* and *The Mental Health Act* respecting to fire safety in special-care homes, homes for the aged, group homes, approved homes and private-service homes.

Inspections

Fire Prevention Officers, based in North Battleford, Prince Albert, Regina, Saskatoon, Swift Current and Yorkton provide inspection services throughout the province.

The Fire Commissioner's Branch carries out an inspection program including all classes of buildings, with the exception of residential dwellings. Inspection of residential dwellings is promoted by the Fire Commissioner's Office through the local fire chief having jurisdiction. Buildings are inspected in the interest of exits, fire safety and evacuation procedures.

During the period of April 1st to December 31, 1990 routine inspections were conducted in 81 towns, villages and hamlets. Fire prevention officers made 1,238 inspections excluding oil burner inspections/solid-fuel burning appliances/sprinklers. Of this number 816 were special inspections and 317 were reinspection follow-ups on previous orders. A total of 130 orders to remedy certain conditions within specified periods of time were issued.

In urban municipalities with paid fire departments, *The Fire Prevention Act, 1980,* provides authority and assigns responsibility for inspections to the local jurisdiction.

Plans and Specifications

The Building Standards Branch continues to review plans and specifications for new buildings or additions to existing buildings on behalf of the Fire Commissioner.

Plans required to be submitted were examined for compliance with The Flammable Liquids Regulation, The Hotel Regulations, The Regulations Governing Fire Safety in Educational Buildings, The Regulations Governing the Installation of Automatic Sprinkler Systems, *The Uniform Building and Accessibility Act* and pertinent sections of the regulations under *The Housing and Special Care Homes Act.*

In addition, the Fire Commissioner's Branch reviews plans for churches, lodge rooms, public halls and private schools with an occupant load of sixty persons or less. The following table shows the number of plans and specifications reviewed since 1988-89.

Table 20
Plans and Specifications Reviewed, by Disposition, 1988-89 to December 31, 1990

Disposition	1988-89	1989-90	1990
Approved	338	455	275
Approved subject to alteration	492	497	350
Rejected &/or pending	71	74	219
Design consultations	113	279	147
Total	**1,014**	**1,305**	**991**

Fire Investigation

From April 1st to Dec. 31, 1990 the Fire Commissioner's staff participated in 82 fire investigations including cases in where arson was suspected, as well as where it was of public interest to determine the cause of the fire. While fire prevention officers made a number of investigations unassisted, they frequently aided law enforcement officers and Local Assistants in determining the cause of fire.

It should be noted that all reported fires are investigated for cause, origin and circumstance surrounding the fire, by either the Local Assistant to the Fire Commissioner, police, insurance agents, special investigation units, the Fire Commissioner's staff or a combination of these forces.

Fire Record

Under the provisions of *The Fire Prevention Act*, the Fire Commissioner is required to maintain a record of fires occurring in the province, including facts relating to origin and circumstances, as determined by investigations, reports of fire chiefs, insurance adjusters and police. Information contained in reports of fires are summarized in the Annual Report of the Fire Commissioner. The gathering of these statistics in vital to the identification of problem areas and indicates where resources should be committed to address problem areas.

1990 saw a decrease in the number of fires reported and the amount of property loss. Total fires decreased from 2,900 to 2,764 along with a $2 million dollar reduction in dollar loss from $46 million to approximately $44 million.

Unfortunately the number of fatalities increased from 13 to 22. This most significant information gathered pointed out 18 of 22 fire fatalities occurred in single family dwellings. Thirteen of these deaths were children. This loss of life is consistent with the North American average where 80 - 85% of fire deaths occur in residential occupancies. Fire Prevention and Public Education Programs will place more emphasis on fire safety in the home, home inspection programs and educating people on how to behave should a fire occur.

As well, adoption of The National Fire Code, 1990 will call for the installation of smoke detectors in all dwelling units. This move will have a favourable impact in reducing the amount of lives lost from fire.

Oil Burners

The Fire Prevention Act, 1980 and regulations thereunder require that distributors and wholesalers of oil burners obtain an annual licence, and that firms or persons installing and servicing oil-burning equipment take out an annual or quinquennial licence, as authorized by the Fire Commissioner. The number of licences and the number of oil burner installation permits issued from April 1st to December 31, 1990 , are shown in Table 21.

During this time period 4 oil burner inspections were made.

Table 21
Oil Burner Licences and Permits Issued under *The Fire Prevention Act, 1980*, Saskatchewan, April 1 - December 31, 1990

Type of licence or permit	1990
Wholesalers or manufacturers (annual)	3
Installers (annual)	9
Installers (quinquennial)	34
Total oil burner permits (annual)	**5**

Fire Prevention and Public Education

Throughout the year, fire prevention and fire training films were widely distributed by Media House Productions and the Fire Commissioner's Office. These films were used by schools, fire departments and various organizations to support fire prevention and public education programs delivered at the local level.

The Fire Commissioner's Branch continues to advise municipal councils and fire departments on fire protection requirements. Administrators and staff from institutions, hospitals and hotels received information regarding fire safety programs, evacuation drills and fire prevention programs. In addition, 180 special meetings were held with fire chiefs, local authorities and other persons concerned with fire prevention. The fire prevention education program is summarized in Table 22.

Table 22

Selected Activities in Fire Prevention & Public Education, Saskatchewan, April 1, 1990 - December 31, 1990

Selected Activities	Number of Meetings	Attendance
Fire chief's	180	--
Fire department	134	658
Hospitals and Special-Care Homes	36	153
Council	26	100
Public	21	591
School boards	10	67
Other	79	604
Training:		
Babysitting courses	27	1,397
Film showings	366	15,009
Fire departments	--	--
Fire drills	19	2,780
Hospitals	39	1,189
Special-Care Homes	26	659
Schools	170	14,359
Other	13	265
TOTAL	**1,146**	**37,831**

Note: Attendance figures are not recorded for all activities.

Fire Prevention Week

In 1990, the week of October 7 - 13 was designated as Fire Prevention Week and was emphasized by special lectures to school children, distribution of films, and fire prevention literature. News releases, public service announcements and special messages were delivered through the support of all media.

The Fire Commissioner's Annual Fire Prevention Poster Competition was held during this week. The competition was divided into eight groups, covering Grades 1 to 12 in four divisions for city and rural schools. Approximately 3,200 entries for judging were received. Thirty three cash awards as well as certificates were provided to the winners. Winners of the contest were notified of their awards by the Minister.

Firefighter Training and Fire Preven Program

In 1990, scheduled training programs for fire fighters were conducted in 235 communities. This training led to 5,754 certificates being awarded to industrial, volunteer and paid fire fighters.

To support delivery of training programs, Fire Service Instructor courses were conducted in Delisle, North Battleford and Regina. These new Instructors will deliver programs to their own departments as well as assist the Fire Commissioner's Office with delivery to others. The continued growth of regional training programs provides more efficient and effective training to firefighters. This approach allows for both multi-level training as well as a variety of programs to be delivered simultaneously. Supporting the newly formed Saskatchewan Association of Volunteer Firefighters, through their regional schools, as well as regional programs scheduled by the Fire Commissioner's Office has led to the issuance of several hundred certificates. This approach will expand as program delivery continues.

More than 80 departments are now delivering Level 1 Modules to their own departments. Ultimately all active departments will deliver their own programs calling upon the Fire Commissioner's staff for material support, certification and some assistance with program delivery.

Certifiable training programs are underway with several paid departments. The City of Prince Albert was successful in having their entire fire department certified to Level 1 firefighters by the Fire Commissioner's staff.

Two regional vehicle extrication courses were delivered in conjunction with Saskatchewan Emergency Measures Organization. More than 120 firefighters have taken this train the trainer program in the last two years. These trainees returned to their respective communities where their experience was shared with their department members.

In May of 1990 the Twelfth Annual Fire Investigation Course was held at the Saskatchewan Police College. This program has grown in importance and developed a reputation as one of the better basic fire investigation programs in Canada.

One of the most successful fire prevention programs continues to be the Hospital and Special Care Home Program. More than 1,848 staff members in 65 hospitals and Special-Care Homes received training in fire prevention, fire protection equipment and the safe relocation and evacuation of residents.

Finally, 587 people took part in 7 miscellaneous fire prevention and training programs. These sessions involved members of the St. Louis Rehabilitation Centre, Wascana and Kelsey Institute, Prince Albert Youth Camp and several industrial organizations. See Table 23.

Table 23
Firefighter Training Programs Offered From April 1, 1990 to December 31, 1990

Modules	Number	Attendance
Elementary Fire Schools	9	183
Certified Courses	108	2,064
Regional Courses	36	1,033
Instructor's Course	3	24
Fire Investigation Course	2	49
Modular Presentation Program	29	637
Certification Testing	20	303
Misc. Courses/ Seminars	27	587
Auto Extrication	2	40
Fireworks Supervisory	1	25
TOTAL	**237**	**4,945**

Building Standards Branch *

* The Building Standards Branch moved to Saskatchewan Community Services effective January 1, 1990.

Objectives

- To provide minimum safety standards for the design, construction, use and occupancy of buildings.
- To provide standards that will ensure that an appropriate range of buildings will be accessible to persons with physical disabilities.
- To assist and advise municipalities in the administration and enforcement of the provisions of provincial legislation governing building construction.
- To assist and advise clients in application of the standards for building construction.

Legislation and Regulations

The branch is responsible for *The Uniform Building and Accessibility Standards (UBAS) Act* and regulations under the Act.

The Building Standards Regulations and The Accessibility Standards Regulations contain the technical standards for construction of buildings and include health, fire safety, structural sufficiency, and barrier-free design requirements. Drafts of regulations amendments to adopt the 1990 National Building Code of Canada and to permit the phasing out of building regulations under other provincial legislation were completed.

Participation in the Provincial/Territorial Committee on Building Standards and attendance at the twice a year meetings kept Saskatchewan abreast of national issues and provided the opportunity for Saskatchewan to voice input on national initiatives related to building safety.

The Building and Accessibility Standards Enforcement Fees Regulations were enacted. These regulations set the amounts that municipalities must pay for plan review and inspections performed by provincial inspectors.

The Rural Municipalities Buildings Standards Resolution Regulations were enacted. These regulations allow the rural municipalities which pass a corresponding resolution to extend the application of building standards requirements to farm buildings.

Municipal Coordination

Municipal building bylaws must be submitted to the branch for review, to allow the Minister the opportunity to disallow any bylaw which is not in conformance with the provisions of the legislation. Municipalities may also submit bylaws prior to passage for comment. Fifty-five bylaws were reviewed in the last nine months of 1990.

The Municipal Enforcement Assistance Program was established in 1990. The program makes provincial inspectors available to provide municipalities with plan review and inspection services. Eighteen municipalities applied and thirteen municipalities were accepted to the program for 1991.

Municipal building inspectors were encouraged to use the branch as a technical resource. The quarterly Building Inspectors Newsletter provided information about technical matters and items related to the provincial legislation.

Presentations on the UBAS Act and regulations were given to representatives of urban, rural and northern municipalities, architects, engineers and building officials. Thirteen workshops were given for administrators of urban and rural municipalities. The Building Bylaw Handbook was prepared and distributed.

Plans Review and Inspections

Plans review and inspection services were provided to building owners, builders, designers, municipalities, municipal building inspectors, and other provincial government branches.

The provincially appointed inspectors under the UBAS Act provided technical advice and assistance to municipal administrators and buildings inspectors by written, telephone and in-person inquiries. One plan review was done for a municipality under the Municipal Enforcement Assistance Program.

Architects, engineers, building designers, and contractors were given advice and assistance in application of the National Building Code and the provincial legislation. Written, telephone and in-person assistance was supplied.

Plan reviews were done for the Fire Commissioner's Branch. In the last nine months of 1990, 769 sets of project plans and specifications were reviewed and 147 design consultations were completed.

Saskatchewan Building and Accessibility Standards Appeal Board

The Appeal Board met once to hear an application from owners requesting an exemption from accessibility standards requirements.

Licensing and Support Services Section

Objectives

- To administer the provisions of *The Gas Licensing Act* and *The Electrical Licensing Act*.
- To provide a high degree of safety protection to the public with respect to gas and electrical installations by establishing minimum qualifications pertinent to the licensing of journeymen and contractors engaging in the work of gas and electrical installations.

Activities

- Licence contractors, employers and tradespersons making gas and electrical installations, suppliers of gas and electrical equipment and propane distributors

Gas Licensing

Under the provisions of *The Gas Licensing Act*, propane distributors (storage and filling plant operators), installation contractors, employers, fitters and wholesale suppliers of gas appliances and equipment are required to hold a licence. Licenses are issued on a one year basis or for a term not exceeding five years to individuals or companies who comply with the conditions of licensing set forth in the Act and Regulations.

The number of individual licenses issued in 1990-91, and the total licenses in effect during the 1990-91 and 1989-90 fiscal years are shown in Table 24.

Table 24
Licences in Effect Under *The Gas Licensing Act*

Type of Licence	Individual Licenses Issued 1990-91	Total Licenses In Effect 1990-91	Total Licenses In Effect 1989-90
Domestic gas fitter	279	844	891
General gas fitter	445	1,122	1,124
Domestic gas contractor	100	225	235
General gas contractor	168	337	351
Limited gas contractor	5	20	24
Gas supply house	4	17	16
Employer's	15	58	57
Propane distributors	189	464	445
TOTAL	**1,205**	**3,087**	**3,143**

Electrical Licensing

Under the provisions of *The Electrical Licensing Act*, contractors, employers, journeymen and wholesale suppliers of electrical equipment are required to hold an appropriate class of licence. Licenses are issued on a one year basis or for a term not exceeding five years to individuals or companies who comply with the conditions of licensing set forth in the Act and Regulations.

The number of individual licenses issued in 1990-91 and the total number of licenses in effect during the 1990-91 and 1989-90 fiscal years are shown in the following Table 25.

Table 25

Licences In Effect Under *The Electrical Licensing Act*

Type of Licence	Individual Licenses Issued 1990-91	Total Licenses In Effect 1990-91	Total Licenses In Effect 1989-90
Full Contractor	396	870	915
Limited Contractor	41	49	53
Restricted Contractor	19	62	63
Employers	122	145	141
Supply House	21	24	23
Full Journeymen	1,212	3,961	4,157
Restricted Journeymen	34	153	148
TOTAL	**1,845**	**5,264**	**5,500**

Emergency Measures Organization

* Saskatchewan Emergency Measures Organization moved to Saskatchewan Community Services effective January 1, 1991.

Objectives

- To develop an effective emergency response structure at both the provincial and municipal levels of government to ensure the survival and recovery of our citizens and communities from any peacetime emergency or disaster.
- To enhance the national capability to respond to any national emergency.

Activities

- Ensure all departments and agencies develop a response capability for meeting their own emergencies as well as providing assistance to municipalities and other departments as required.
- Encourage and assist municipalities with emergency planning, training and exercises to provide a greater capability to respond to emergencies.
- Encourage development of Mutual Aid Areas so all resources in an area can be brought to bear on any emergency.
- Develop programs to ensure the Government will be able to continue normal or near normal operations during a major emergency or disaster.
- Utilize federal funding available under the Joint Emergency Planning Program to further the development of emergency planning in Saskatchewan.
- Develop and conduct training programs to meet the emergency planning needs of departments, agencies and municipalities.

Provincial Emergency Preparedness

The Provincial Emergency Planning Act is now legislation and in the hands of every local government. The Emergency Planning highlights include:

- Clarification of roles and responsibilities of provincial and municipal governments;
- Local governments to be extended the authority to declare local emergencies; and
- Good Samaritan Clause protects people from legal action when lending assistance during a locally declared emergency.

Efforts continue to ensure various agencies and departments fulfill their obligation outlined in the Cabinet Directive.

Municipal Emergency Preparedness

Municipal emergency preparedness continues to be the main thrust of the efforts put forward by the Saskatchewan Emergency Measures Organization.

Visits to all Mutual Aid Areas were made, as well as contact through letters, phone calls and training courses with the following results:

- Municipal Emergency Measures Organizations were established, including both urban and rural local governments.
- There were two more Mutual Aid Areas formed.
- There were several municipal paper exercises and two major airport exercises conducted.

- Training continued with a decentralized training program visiting 14 communities, and an EMO Co-ordinators Conference, in conjunction with the federal Emergency Preparedness Canada staff.

- Ten Dangerous Goods Courses were conducted at the municipal level by staff from the Saskatchewan Emergency Measures Organization.

- Total attendance at all courses and conferences exceeded 900.

- Suitable municipal candidates continued to take advantage of the training offered at the federal Emergency Preparedness College at Arnprior, Ontario.

Joint Emergency Preparedness Program (JEPP)

The Joint Emergency Preparedness Program (JEPP) is a federal program which provides 6.5 million across Canada to help fund those projects which will enhance the emergency response capabilities at both the provincial and municipal levels. Following the signing of a Memorandum of Understanding between the Government of Canada and the Province of Saskatchewan in 1985, the Saskatchewan Emergency Measures Organization negotiated a five year emergency preparedness program with Emergency Preparedness Canada which identified joint priorities and interest areas and qualified for funding under JEPP. The budget for year two of the second 5-year program received the approval of Emergency Preparedness Canada.

In 1990-91, over $394,700 in federal funding for JEPP projects was approved for Saskatchewan. This amount included $150,556 for our provincial five-year program and $244,240 for 9 municipal projects which were submitted.

National Emergency Arrangements (NEA)

In accordance with the Memorandum of Understanding, signed between the government of Canada and the government of Saskatchewan in 1985, the government of Saskatchewan is assisting the federal government in implementing 11 NEAs.

The government has contracted a consultant to coordinate the necessary federal-provincial agreements to implement these national emergency agencies.

The Province of Saskatchewan is putting forward a model for Food and Agricultural Emergency Response (FAERS). Much progress has been made with the federal government in developing the National Emergency Arrangements for Energy (Gas and Electricity). In the next year, Saskatchewan will begin work with the federal government on the development of:

- National Emergency Arrangement for Transportation

- National Emergency Arrangement for Health & Welfare Canada

- National Emergency Arrangement for Manpower

- National Emergency Arrangement for Communication

- National Emergency Arrangement for Construction

Table 26
Municipal Projects Paid Under JEPP, 1990-91

No.	Project	Actual Cost	Federal Contribution
100	Coronach Rescue Vehicle	40,047.07	19,937.87
101	Shaunavon Communications	34,131.90	16,996.11
102	Moosomin Rescue Vehicle	142,030.76	71,015.38
103	Canora Communications	94,707.50	47,353.75
104	Gravelbourg Rescue Vehicle	29,863.07	14,931.53
105	Quill Plains Rescue Vehicle	18,273.62	9,136.81
106	Oxbow Communications	29,506.23	14,451.31
107	Tisdale Communications	27,733.55	13,866.78
108	Canora Rescue Vehicle	75,399.86	37,642.03
Total		**$491,693.56**	**$245,331.57**
9 Projects		(49.9%)	

Table 27
Provincial Projects Paid Under JEPP, 1990-91

No.	Project	Actual Cost	Federal Contribution
24-6/90	Sask. Five Year Plan	$420,162.00	$150,556.75
Total		**$420,162.00**	**$150,556.75**
1 Project			(35.83%)

Public Affairs Branch

Objectives

The Public Affairs Branch was created in 1990 to undertake activities reflecting the department's new commitment to education, information, public involvement and issue management.

Activities

Education:

A staff education co-ordinator was hired and began developing a province-wide education strategy, including services and programs for the public, and for various schools and workplaces.

The branch provided public speakers and educators on all aspects of the environment.

The Clean Cat Program was expanded from a one week anti-litter campaign into a year-round in-school recycling program.

Information:

The department issued approximately 40 media releases and announcements. The branch answered thousands of public and media inquiries, and produced and distributed a growing list of publications on the environment. These publications cover a variety of topics, including environment and safety, sustainable development, conservation, waste management, water quality, reuse and recycling, and much more.

Publications issued for the first time included:

- Choose to Conserve/and Activity Guide for Teachers
  - a practical consumer guide for protecting the environment, published jointly with the Family Foundation

- A series of six brochures, accompanied by a major advertising campaign, on Helping the Environment
  - at home and school, energy conservation at home, at home outdoors, consumer action, transportation, and more conservation at home

- Environment and Public Safety Today
  - the department's stakeholder newsletter

- Our People
  - the department's internal staff newletter

The branch also began preparation of a comprehensive directory for Reusing and Recycling in Saskatchewan to be available to the public in 1991-92.

Because public demand for information continues to grow steadily, the department initiated plans to develop a provincial Environmental Resource Network. Initial stakeholder consultation meetings were held. When the project is launched in the 1991-92 year, it will include a network of approximately 200 "mini-centres" and "catalogue centres" in communities across the province, with joint operation of each involving local environment, municipal, library and stakeholder groups. It will also include an advisory board, a toll-free inquiry line, and an expanded list of publications.

Public Involvement:

The Public Affairs Branch coordinated the department's consultation programs and advisory committees. Some of the projects the branch was involved in were The Landfill Meetings as part of a provincial solid waste strategy, the development of a Great Sand Hills Land Use Strategy, a Clean Air Strategy, the Saskatchewan Environmental Assessment Review Commission, and the revision of the Mineral Industry Environmental Protection Regulations.

Issue Management:

We are responsible for media relations, media monitoring, surveys, and assisting in crisis management and strategic planning for the department.

Corporate Services

Objectives

- To provide central administrative management, financial, human resources, computer systems and office support services to all branches.
- To assist and advise department management; and develop, evaluate and implement administrative policies.
- To represent the department and provide liaison with private and central government agencies for the acquisition of resources.

Activities

- **Executive Administration** for Minister and Deputy Minister corporate department management; includes all employees and resources for operation of Minister and Deputy Minister offices.
- **Management Services** for administrative management consultation; preparation of budgets, legislation, Cabinet and Treasury Board submissions; administrative policy development and implementation; co-ordination of department strategic planning process and Executive/ Management Committee meetings.
- **Financial Services** for central accounting of expenditures and revenues; contract administration, and grant payment authorization; the acquisition of CVA vehicles, supplies, equipment and services; and financial operations of the Environmental Protection Fund.
- **Human Resources** for management of central records, forms, filing, mail and library functions; provision of office space, furniture and parking; and staff recruitment, classification and development.
- **Systems Services** for acquisition, management and operation of all department computer systems; provision of analyst support services; and co-ordination of integrated systems networks and systems training.

Management Services

Focus was placed on services to programs and included a change in title from Administration to Corporate Services to better reflect the corporate level of support services provided to department programs.

The initiation of a Strategic Planning Process was accomplished involving major co-ordination responsibilities. Executive and Management Committees were re-established and put into operation to develop and approve department policy.

Table 28
Department Expenditures and Revenues

Expenditures	**$**	**% Total**
Corporate Services	$ 1,461,241	11.4
Planning and Assessment	2,288,483	18. 0
Environmental Protection	4,464,847	35. 1
Public Safety	2,638,065	20. 7
Emergency Measures Organization	280,122	2.2
Payments to Saskatchewan Property Management Corporation	720,399	5.7
Grants for Environmental Purposes	588,979	4.6
Grant to Toxicology Research Centre	200,000	1.6
Grant to Water Appeal Board	54,495	0.4
Members of the Executive Council	36,610	0.3
Total	**$12,733,241**	**100%**

Revenues	**$**	**% Total**
Boiler and Pressure Vessel Safety - Fees/Licences	$1,128,890	67.8
Elevator and Electrical Safety - Fees/Licences	226,119	13.6
Amusement Ride - Fees/Licences	10,807	0.6
Gas Safety - Fees/Licences	105,681	6.3
Fire Commissioner Licences	1,369	0.1
Emergency Measures Organization - Cost Share Claims/Canada	183,038	11.0
Building Standards	4,528	0.3
Other	5,287	0.3
Total	**$1,665,719**	**100%**

Figure 3
Saskatchewan Environment and Public Safety Percentage Allocation of Department Expenditures

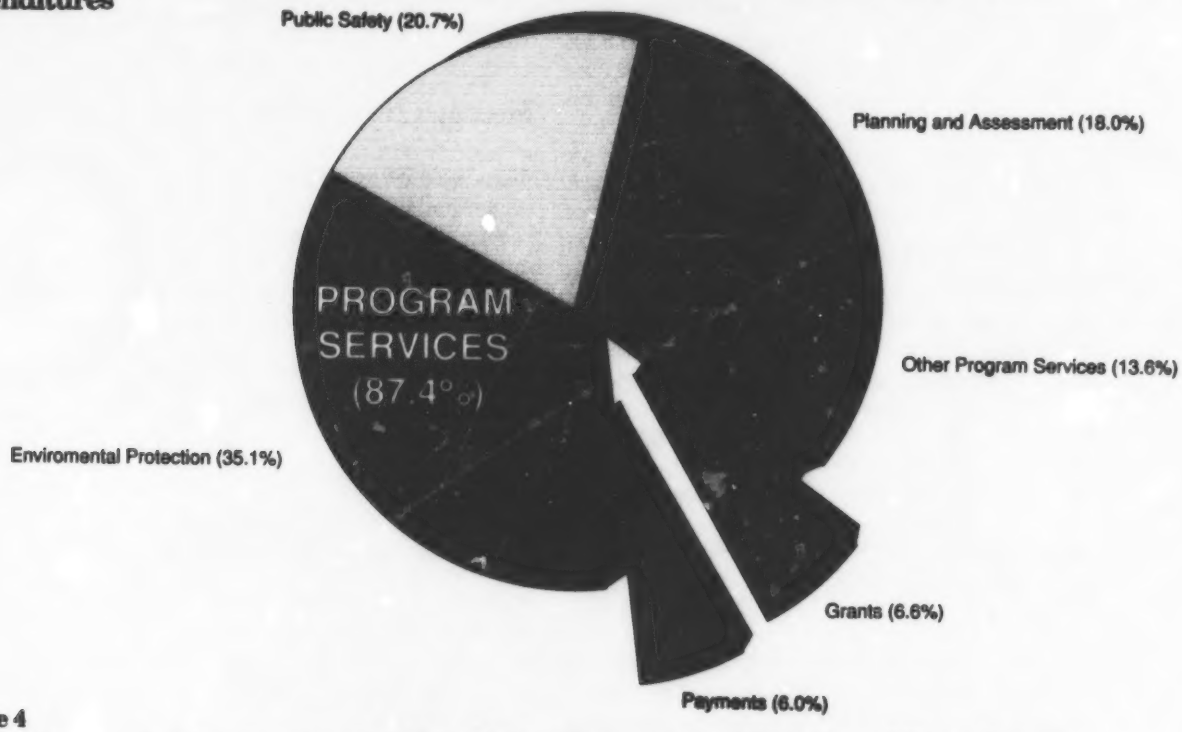
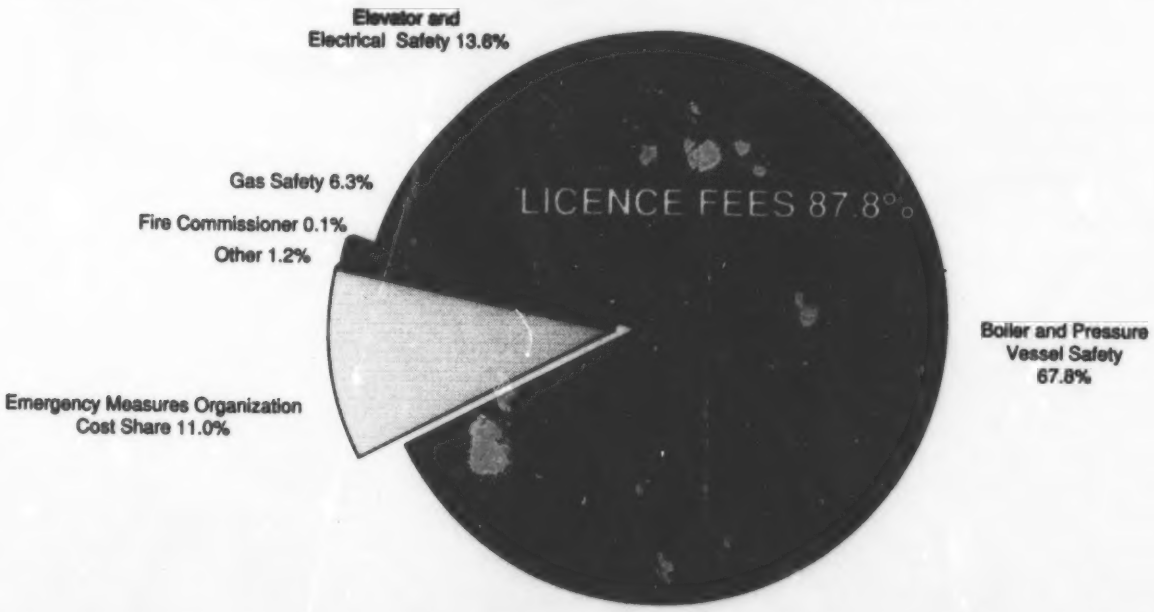


Figure 4
Saskatchewan Environment and Public Safety Percentage Allocation of Department Revenues


Elevator and Electrical Safety 13.6%
Gas Safety 6.3%
Fire Commissioner 0.1%
Other 1.2%
LICENCE FEES 87.8%
Boiler and Pressure Vessel Safety 67.8%
Emergency Measures Organization Cost Share 11.0%

Financial Services

Responsibilities cover a full range of financial services with respect to the management and accounting of the department's expenditures and revenues. Total expenditures of $12,733,241 and revenues of $1,665,719 were processed in 1990-91.

During the year under review, Financial Services was responsible for:

- Authorizing and making payments from the department's appropriation in accordance with established financial policy, budgetary guidelines and legislative authority. A total of 8,076 payment transactions were handled in 1990-91. Financial records of the department's expenditures and revenues were maintained and forecasts were provided to Sask Finance on these activities.
- Developing, improving, and controlling the department's financial and accounting procedures.
- Reviewing Provincial Auditor reports and ensuring that corrective action was taken on any problem areas.
- Providing assistance and co-ordination in the preparation of the department's annual budget and estimates.
- Contract administration and grant payments. A total of 41 contracts were administered and grant payments to 12 agencies were made in 1990-91.
- Administering and preparing financial statements for the Environmental Protection Fund.
- Providing support services to the department for procurement of goods and services maintaining a central stockroom, provision of telephone services, and administering the CVA vehicle fleet. A total of 42 CVA vehicles were maintained for the department in 1990-91.

Automation continues to enhance the service and efficiency of financial support services to the department. There is significant opportunity for further enhancements in the future.

Human Resources

Responsibilities include central personnel, accommodation, library, records and mail services to the department. The government automated Human Resources System is utilized for most personnel transactions through the use of personal computers.

A total of 16 recruitment, 13 terminations and 16 classification actions occurred during the fiscal year.

In addition to this, a total of 38 non-permanent employees were recruited to meet program requirements.

The staff development function continued as an important factor in meeting the training needs of department staff. Employees participated in 70 training courses over the year representing 327 person days of training for the department.

Table 29
Department Position Allocation

Program	Person/Years	%Total
Corporate Services	22.0	13
Planning and Assessment	20.0	12
Environmental Protection	65.0	38
Public Safety	60.3	35
Emergency Measures	3.0	2
Total	**170.3**	**100**

Environment Library

The library subscribed to periodicals and purchased books, reports, pamphlets and microfiche for staff. Inter-library loans, and co-ordination of staff requests for computer searches was also provided.

The library houses 850 books, 5,300 government documents, and annual reports for 53 agencies. It has subscriptions for 163 journals and newspapers. It is also a depository for copies of Environmental Impact Statements for public use during review periods.

Table 30
Environment Library Services

Inter-library loans (from other libraries)	400
Inter-library loans (to other libraries)	100
Circulation to staff	1100
Circulation to public	120
Reference questions	525
Book orders for the department	500
New journal orders for the department	6
Materials catalogued	525

Systems Services

Responsibilities include:

- Provision of service and support to department staff in utilizing technology;
- Advancement of department use of technology to increase department effectiveness and efficiency;
- Acquisition of contract analyst resources, assisting branches in acquisition of computer equipment and software, providing analyst support services and developing computer programs.

Major activities included:

- Completion of feasibility study and conceptual design for the Water Quality Monitoring System;
- Implementation of computer networks for senior management, Air and Land Protection Branch, Chemical Management Unit, Public Affairs Branch and Planning and Assessment Division
- Computer equipment and software acquisition for department program branches consisting of 30 computers, 9 laser printers and 6 letter quality printers.

Student employment continued with the hiring of three students in the SIAST Work/Study Program.

Progress was made on the development of a Department Informatics Strategic Plan and Integrated Department Information System.

Table 31
Department Computer Systems and Projects

Division	System/Project Description
Corporate Services	Development of Corporate Databases and networks.
	Maintenance, support and enhancement of existing systems - Word Processing - Decision Assist
	Online inquiry/update of budget and financial data of Revenue and Expenditure system (RES); cash receipts validation, cash mail record, general ledger.
	Online inquiry/update of personnel data (HRS).
Environmental Protection	Maintenance, support and enhancement of existing systems - Word Processing - Decision Assist
	Environmental Data Management System microcomputer system which processes air quality information from datalogging equipment.
	Database - air quality permit information
	Water Quality database systems ESQUADAT - water chemical quality monitoring data (mainframe system); BIODAT - bacteriological data (mainframe system); WINDAT - water/wastewater database microcomputer reporting system receiving data from ESQUADAT.
	Standalone databases for chemical data, spill response data, PCB storage facilities, database of waste disposal/recycling facilities.
	Multi access database for hazardous substance storage facilities.
Public Safety	Maintenance, support and enhancement of existing systems - Word Processing - Decision Assist spreadsheets, specialized systems i. e. SPRINKS - Database for licensing and fees - Database for statistical reporting for Fire Commissioner
	Mainframe system for Boiler and Pressure Vessel licensing and inspection data recording.

Table 31 continued

Division	System/Project Description
Emergency Measures Organization	Maintenance, support and enhancement of existing systems - Word Processing - Decision Assist (spreadsheets) - Database for Line Load Control Program
Planning and Assessment	Maintenance, support and enhancement of existing systems - Word Processing - Database of names and addresses - Decision Assist (spreadsheets, models) Integrated data information network.

Note: Systems indicated as mainframe utilize Westbridge. Other systems use microcomputers.

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